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ABSTRACT

Visits in the Spring of 1972 to five school districts (Norfolk, Virginia; Texarkana, Arkansas; Gary, Indiana; Gilroy, California; and Grand Rapids, Michigan) that had implemented educational performance contracting programs during the 1970-71 school year are reported. Changes in the content and methods of instruction, measurement and evaluation, and management seem to have been brought about by the programs. The large gains hoped for by many proponents of performance contracting have not usually been achieved. In each of the districts, a diagnostic-prescriptive approach to individualization of instruction has been encouraged by the performance contracting programs. More attention is being given to the need for a wider range of self-instructional materials in such programs. Programs that had been converted from performance contracts to in-house efforts tended to be adapted to individual teaching styles, and more diversity among classrooms resulted. With one exception, the 1971-72 programs used about the same resource support as they had the previous year, or even greater support was provided. Performance contracting (which is still largely limited to reading and mathematics courses) ties contractor payments to student test results and, therefore, focuses attention on testing and evaluation. The result has been increasing concern with development of better measurement techniques and evaluations. The performance contracting programs forced school administrators to become involved with the course of a project from the point of making contractual arrangements to the implementation of the programs in the classrooms. (Author/DB)

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December 1972

THE EVOLUTION OF EDUCATIONAL PERFORMANCE CONTRACTING IN FIVE SCHOOL DISTRICTS, 1971-72

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PREFACE

During the 1970-71 school year the authors were part of a Rand team that made a detailed study of performance contracting programs in five school districts:* Norfolk, Virginia; Texarkana, Arkansas; Gary, Indiana; Gilroy, California; and Grand Rapids, Michigan. This study was sponsored by the Assistant Secretary for Planning and Evaluation, U.S. Department of Health, Education, and Welfare, under Contract No. HEW-05-70-156. Prior to the 1971-72 school year the question arose as to what might happen to these programs, and the U.S. Office of Education agreed to sponsor a modest Rand reexamination. In the spring of 1972 a visit was paid to each of the five districts. Interviews were conducted, classrooms were visited, and materials were collected to gain some understanding of how the 1970-71 programs had evolved. No attempt was made to replicate the earlier, detailed studies. The goal was merely to renew acquaintance with each project and see what had happened to them during the 1971-72 school year. This report summarizes the results of our visits.

The present investigation was sponsored by the U.S. Office of Education pursuant to Contract No. OEC-0-72-1381.

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*P. Carpenter, A. W. Chalfant, G. R. Hall, M. L. Rapp, and G. C. Sumner, *Case Studies in Educational Performance Contracting*, 6 Vols., The Rand Corporation, R-900/1-6-HEW, December 1971.

SUMMARY

This study reports on visits in the spring of 1972 to five school districts that had implemented educational performance contracting programs during the 1970-71 school year. Some of the 1970-71 programs were continued, some had been cancelled, and some were "turnkeyed" (adopted for in-house operations) for the 1971-72 school year. In two districts new programs were started in 1971-72.

Our review in the spring of 1972 generally reinforced the conclusions we reached after a study of performance contracting programs during the 1970-71 school year. Changes in the content and methods of instruction, measurement and evaluation, and management seem to have been brought about by the programs. The programs may not, however, be having lasting impacts on resource usage patterns. Achievement test score results for some programs appear superior to gains achieved in conventional remedial programs, but in other programs the results are about the same. The large gains hoped for by many proponents of performance contracting have not usually been achieved.

In each of the districts a diagnostic-prescriptive approach to individualization of instruction has been encouraged by the performance contracting programs. More attention is being given to the need for a wider range of self-instructional materials in such programs. Programs that had been converted from performance contracts to in-house efforts tended to be adapted to individual teaching styles, and more diversity among classrooms resulted.

The results obtained in the 1970-71 programs suggested that a reduction in the cost of remedial education might be achieved. However, with one exception, the 1971-72 programs used about the same resource support as they had the year before, or even greater support was provided.

Performance contracting (which is still largely limited to reading and mathematics courses) ties contractor payments to student test results and therefore focuses attention on testing and evaluation. The result has been increasing concern with development of better measurement techniques and evaluations.

The performance contracting programs forced school administrators to become involved with the course of a project from the point of making contractual arrangements to the implementation of the programs in the classrooms. This has had the effect of sensitizing administrators to problems and possibilities in areas such as new approaches to instruction, teacher training, test and evaluation, union relationships, and acquisition and administration of federal funding.

Only limited data on achievement gains during 1971-72 are available. In Gary, the 22-day teacher strike led to cancellation of the post-test, so no gain scores are available. In Texarkana, the gains were uniformly less than the objectives; for example, instead of 75 percent of the students in the labs making one grade level gain or better, only 38 percent improved that much in reading comprehension and only 28 percent in arithmetic. In Norfolk the program group in most but not all cases did not show gains significantly different from the control group. In Grand Rapids the results were mixed; one program had gains of about two achievement years, and the others were in the 0.5 to 1.2 range. In Gilroy in a program started in 1971-72 only two of the 29 students achieved the target gain of nine months' growth. The students who had been in the 1970-71 program, but were not in such a program in 1971-72, did exceptionally well on the third-grade reading test. The fourth-grade results were no better than expected for those who had participated in the program, but nonparticipants made substantial gains. Whether these results were due to curriculum improvements cannot be determined.

ACKNOWLEDGMENTS

We are indebted to many teachers and administrators in the five school districts we studied for their advice, information, and comments. We thank them for their assistance. Grace Carter and John Pincus of Rand also provided helpful and appreciated suggestions.

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I. INTRODUCTION

THE PRESENT STUDY

Educational performance contracting was in vogue during the 1970-71 school year and perhaps as many as 80 or 90 school districts experimented with the technique. Five of these districts were studied in detail by the present authors and their colleagues under the sponsorship of the U.S. Department of Health, Education, and Welfare.* In an effort to learn more about these programs, in the spring of 1972, under the sponsorship of the U.S. Office of Education, we visited each of the five districts and made a brief study of the current status of performance contracting. This report presents the conclusions drawn from these visits to Norfolk, Virginia; Grand Rapids, Michigan; Texarkana, Arkansas; Gary, Indiana; and Gilroy, California.

The various performance contracted programs studied in 1970-71 have been either (1) continued with very little modification, (2) continued on a fixed-fee rather than on a performance-payment basis, (3) "turnkeyed" with contractors supplying consultation support, or (4) discontinued.

In the jargon of performance contracting, a turnkeyed program refers to the adoption for operation by a school district of a system that a contractor has developed and has implemented in the district, and that is running sufficiently well for the contractor merely to "turn over the key" to the school officials. Much of the literature on performance contracting has stressed the desirability of turnkeying new programs, and this option has become of particular interest.

The disparate experiences and policies in the five districts, as well as the differences among the programs themselves, provided an opportunity to study the evolution of performance contracting. At the same time, the diversity led us to treat each program individually. For each school district, we have tried to focus on the program elements

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*P. Carpenter, A. W. Chalfant, G. R. Hall, M. L. Rapp, and G. C. Sumner, *Case Studies in Educational Performance Contracting*, 6 Vols., The Rand Corporation, R-900/1-6-HEW, December 1971.

and the policy issues that seemed most important in that district. We believe that this approach has increased the pertinence of our findings, although it results in an occasional unevenness in the discussion and analysis of the programs.

BACKGROUND ON PERFORMANCE CONTRACTING IN 1971-72

During the 1970-71 academic year, many school districts sponsored performance contracts, professional education journals debated the concept, and the press and television reported extensively on the many projects. The 20-program experiment sponsored by the Office of Economic Opportunity was particularly in the public eye. The OEO experiment had been planned as a one-year test and OEO held to its plans and did not fund further programs for 1971-72.

At the end of the 1970-71 school year, several local evaluation reports were released including those for the Virginia, Texarkana-Educational Development Laboratories, and Gilroy programs. None of these showed large gains in student achievement. At the start of the 1970-71 year, performance contracting enthusiasts had talked about average achievement gains on the order of 2 years in a single school year. Instead, the gains that were realized were of an order of magnitude familiar to compensatory education specialists--about 0.5 or 0.7, or even 1.0, years of gain per school year. In some cases the performance contracting gains were superior to gains of control groups, but in few cases were they spectacularly large.

The commercial firms, it appeared, have no magic solution for closing the gap between the achievement test scores of students from advantaged homes and those from disadvantaged backgrounds. It was also clear that performance contracting was not going to sweep the nation's schools. Indeed, a number of performance contracting firms left the field, some in serious financial difficulty. Many school officials shelved plans for performance contracting programs and turned to other proposals for educational change. A number of programs, however, were continued and some new ones were started. The *Phi Delta Kappan* estimated during 1971-72 that there were 100 performance contracts in effect; however, 69 of them were in Michigan where the State Department of Education has been

particularly interested in the technique and has an unusual special program in effect.*

Everyone, however, waited for the results of the OEO experiment that was to provide definitive, rigorous experimental data on performance contracting. The results were long delayed and not released until February 1, 1972. OEO's assessment was devastatingly sharp:

> The single most important question for all concerned with the experiment is: Was performance contracting more successful than traditional classroom methods in improving the reading and math skills of poor children? The answer ... is "No."†

As might be expected, individuals and groups who had opposed the experiment from the start responded with "I told you so." Many educators who had been interested in but uncertain about the concept shelved plans for performance contracting on the basis that the OEO results meant that "performance contracting was dead." However, a number of laymen, as well as professional educators and researchers, objected to these conclusions on the basis that they were premature. There have also been a number of attacks on OEO's experimental design and the validity of its statistical analysis and conclusions.‡ The controversy about performance contracting continued throughout the 1971-72 academic year and into the 1972-73 school year. The focus of the controversy has shifted, however. Formerly, it was over the political and educational

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*"OEO, Educators Debate Value of Performance Contracting," *Phi Delta Kappan*, Vol. LIII, No. 7, March 1972, p. 451.

†*An Experiment in Performance Contracting: Summary of Preliminary Results*, OEO Pamphlet 3400-5, Office of Economic Opportunity, Washington, D.C., February 1972, p. 17.

‡Most of the criticisms have been made orally or in fugitive publications. They are summarized, however, in J. A. Mecklenburger and D. M. Goldenbaum, "How OEO Failed Performance Contracting," *Nation's Schools*, Vol. 89, No. 4, April 1972, pp. 31-32; C. Blaschke, "What OEO Did Not Say," *Nation's Schools*, Vol. 89, No. 5, May 1972, p. 36; and a statement by the contractors in Office of Economic Opportunity, *An Experiment in Performance Contracting*, OEO Pamphlet 3400-6, Washington, D.C., June 1972, pp. 229-244. See also the references cited in Gary Saretsky, "The OEO P. C. Experiment and the John Henry Effect," *Phi Delta Kappan*, Vol. LIII, No. 9, May 1972, pp. 579-581.

desirability of contracting with private firms for instruction. Now it centers around whether the 1970-71 results really indicated that performance contracting "failed." A major aspect of this debate is speculation on the results after the initial implementational difficulties encountered in all performance contracting programs had been solved. This controversy gives particular interest to our brief reexamination of the performance contracting programs studied in 1970-71.

II. NORFOLK, VIRGINIA

INTRODUCTION

During the 1970-71 school year, Norfolk participated in a statewide program to improve reading skills through a performance contract with Learning Research Associates (LRA).* LRA had "guaranteed" that in one year the program would bring about gains of 1.7 grade levels in reading as measured by standardized achievement tests. The actual gains were considerably less than this, as Table 1† demonstrates. Note that in all but one case (the seventh grade), the treatment group gained somewhat less than the comparison groups. Whether the gains of the treatment groups were significantly different from those of the compari-

Table 1

COMPARISON OF GAIN SCORES IN 1970-71 PROGRAM

Grade Level	Group Role	Number of Students	Average Grade-Level Gain
4	Treatment	49	0.2
	Comparison	30	0.5
5	Treatment	44	0.1
	Comparison	30	0.4
6	Treatment	47	0.1
	Comparison	30	0.3
7	Treatment	51	0.5
	Comparison	28	0.3
8	Treatment	70	0.7
9	Treatment	39	0.6

*The 1970-71 program was not continued as a formal demonstration but all 7 components were continued in one form or another as in-house programs. See Charles Blaschke, "Experts Couple Warnings with Latest Findings," *Nation's Schools*, Vol. 32, No. 6, January 1972, p. 25.

†From data presented to the Virginia State Board of Education by the State Department of Education on August 6, 1971.

son groups, we do not know. This information was not included in the above report, and as of this writing the raw data have not been made available to the Norfolk City Schools by the evaluator, the Bureau of Educational Research, University of Virginia.

LRA stood to make a maximum of $85 per student, or a total of about $21,250 for the Norfolk portion of the Virginia program. Of this, 25 percent was to be for student mastery of performance objectives. Thus, approximately $15,875 rode on the gain scores. Because of prorations for students who attended less than the required number of instructional periods or who were absent for one or more of the testing sessions, LRA's final payment on the basis of gain scores was over 75 percent of the possible maximum; the payment on the basis of performance objectives was nearly equal to the maximum.

The State Department of Education finished its report by recommending that the LRA program be continued in Virginia, with or without the direct involvement of the contractor. The reasons given for this support were the beneficial affective changes noted among the students and "the professional stimulation and interest generated among teachers by this instructional program."*

The Norfolk program was expanded in 1971-72 from two schools (one elementary and one junior high) to ten schools (five elementary and five junior high), but not as a performance contract. The schools are listed in Table 2.

Table 2

NORFOLK SCHOOLS WITH HIGH INTENSITY CENTERS

Elementary		Junior High	
1970-71	1971-72	1970-71	1971-72
St. Helena	St. Helena	Jacox	Jacox
	Madison		Blair
	Monroe		Campostella
	Stuart		Ruffner
	Titus		Willard

Some 1250 students were involved in the 1971-72 program, in contrast to the 250 students in the 1970-71 program.

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*Ibid.

The 1971-72 program, termed the *High Intensity Program*, was an in-house effort by the Norfolk City Schools. LRA was paid through conventional contracting arrangements for furnishing only the materials for the High Intensity Centers.

STUDENTS

Norfolk undertook a massive busing program at the direction of the U.S. Court during the 1971-72 school year. The objective was to provide the same racial composition in every Norfolk public school by busing whites or blacks or both. As one result, 3000 white students withdrew from the school system.

During the 1970-71 school year, a number of the junior and senior high schools had been integrated with a consequent loss of white students at those levels. The following year, white enrollment was up in some of these schools. In fact, one teacher stated that Jacox Junior High had more white than black students in 1971-72. Most of the losses of white students occurred at the newly integrated schools. For example, Blair Junior High, which had an all white enrollment of around 1400 in 1970-71, lost 400 to 500 students.

In order to integrate the elementary schools with minimum disruption in terms of student travel, most of them were made into lower elementary schools comprising grades 1 through 4 or upper elementary schools comprising grades 5 and 6. St. Helena Elementary was made into a lower elementary school for 1971-72. This meant that the school lost *all* of the students who had been in the 1970-71 program, which was provided for grades 4 through 6.

In principle, a student was a candidate for the program if his IQ was at least 75 and he had scored at least two years below grade level on the reading test given during the regular school testing program. These rules had to be modified in several cases. Because it was so small, for example, almost all of St. Helena's third- and fourth-graders ended up in the program. Only the few who were reading at grade level were not included.

The number of students chosen was dictated by the space available in each school. For example, at one school only a small conference room was available, and only 75 students could participate in the program there.

In the junior high schools, students were selected jointly by the reading teachers and the English teachers. At Blair Junior High, seventh-grade students had their schedules rearranged around reading as a core program. A few minutes were taken from each of their other subjects to make time for reading. Eighth- and ninth-grade students substituted reading for English, social science, science, or another nonelective, and credit was given for the subject that was replaced. In the other junior high schools, seventh-grade students were handled in the same way as those in the eighth and ninth grades.

Teachers usually remarked that the students in the reading program came from the "modified" (i.e., slow) track, although there are officially no tracks in Norfolk's schools. Only one teacher, however, stated that she had a few students who should have been in special education but were put into the reading program because of lack of space in special education classes.

There were the usual problems with poor attendance and student turnover. One teacher had worked with over 200 students since the beginning of the year but had lost nearly 80 of them by spring. Over half of these withdrawals were for poor attendance or because the students would not work at their reading. On the plus side, slightly more than 40 percent of the withdrawals were because the teacher judged the student had made sufficient improvement in reading. Another teacher stated that most of the absences in her class were due to suspensions.

The only reading teacher who had been in the program both years remarked that her students in the second year were generally better than the first year and were not so far behind in reading. The other reading teachers all noted, however, that many of their students could not read. The reading teacher gave each student a test to determine at what level of difficulty he should be working. The junior high teachers said their students were typically reading "at the third-grade level," which is the floor of the test administered.

Can these students read? From the foregoing, it is apparent that the students in the reading program were severely deficient in reading skills as measured by standard instruments. Yet Norfolk's Supervisor of English for Secondary Education stated that the students can read

more than they let on. The truth probably lies somewhere between these views. The students undoubtedly can "read" when it is in their interest to do so; for example, when they are looking at baseball scores or shopping for candy. This is not, however, the same reading measured by standard instruments--the ability to understand sentences and paragraphs. A contributing factor to students' lack of skills of these kinds will be discussed shortly.

STAFF

All of the teachers in the program were former reading teachers. In 1971 they participated in a summer workshop to become acquainted with the program. This workshop was conducted by Mr. Daniel Avent, the director of the program, and the two reading teachers from the 1970-71 program. One of these was still teaching the second year; the other had moved on.

We asked whether the program required any special skills on the part of the teacher for its successful implementation. (It seemed possible that the classroom management techniques required might be difficult for some teachers.) The replies indicated that this was not the case. All of the required traits cited were those that one would expect any good reading teacher to have--ability to communicate with the students, ability to establish rapport with them, knowledge of reading, a diagnostic point of view (ability to spot when a child is in trouble), a positive attitude, patience, and emotional stability. Of these, perhaps only the diagnostic point of view is one which levies special requirements, as most teachers would not have had experience with the diagnostic-prescriptive approach used in the program.

Teacher training, which Avent cited as one of the problems of the program, should supply this. He noted that it took nearly the entire first semester for teachers new to the program to become confident in their ability to conduct it. Up to that point he had to hand-hold to a large extent.

Avent had begun the program for 1971-72 without aides, although each of the teachers had had an aide the preceding year. It quickly became clear that aides were essential because of the individual

attention required. Therefore, Avent assigned an aide to each of the High Intensity Centers. At a number of the junior high schools, an additional aide was assigned to the program by the principal (although only one had been needed at the junior high level the year before). This raises the question as to whether the program was drifting back to the resource-usage pattern of the former reading programs.

INSTRUCTION

The contrast between the instructional methods used in the High Intensity classrooms during 1970-71 and those used in the regular classrooms was dramatic. The High Intensity teachers implemented an open classroom concept, with each student working individually, at his own pace, and responsible for managing his own time. In the regular classrooms, the teachers directed almost all student activities. Students seemed to do almost no reading; instead, they learned their lessons by listening to the teacher. In this way, they could be promoted year after year without ever having mastered any reading skills.

During 1971-72, the reading teachers were no longer in the position of implementing a program on which a contractor's payment depended and were no longer in direct contact with contractor personnel. They were therefore freer to implement the program as they felt best, with the result that there were large observable differences in classroom practice from teacher to teacher. One classroom, in particular, approached the atmosphere of a regular classroom, with teacher and aides responsible for managing the students' work (although each student still had his own course of study).

Whether this change had any effect on student achievement, we do not know, as the evaluation data have not been related to specific classrooms.

MANAGEMENT

Avent has continued to manage the program and act as liaison between Alan Cohen (who worked for LRA on the design of the instructional program and is now with Random House) and Norfolk. Despite the appreciable program development that went on last year, however, all of the

reading teachers complained that they had had trouble getting materials. Statements of objectives, keys to the interim tests of objectives, and the tests themselves were not delivered in time, and some materials were still coming in April 1972. There seems to have been little excuse for this, since the decision to continue and expand the program had been made well before the close of the 1970-71 school year.

Worse yet, deficiencies in the materials used in the program, which became clearly evident during the first year, continued throughout the 1971-72 school year. These deficiencies may well have contributed to the very poor showing in gain scores the first year; Norfolk's failure to bring sufficient pressure on LRA and Cohen to remedy the problem is difficult to understand.

MATERIALS AND EQUIPMENT

The reading teachers noted the following deficiencies in the program materials:

- Not enough materials were provided for teaching skills in reading comprehension at a low level of reading difficulty (elementary level).
- Materials for teaching beginning reading skills (such as the Michigan Language Program and the First Talking Alphabet) were too babyish (junior high level); students resent them. Yet, students need to learn these skills (such as relating the sound of a letter to its form). Materials for the mature nonreader (such as those produced by the U.S. Armed Forces Institute at Madison and the Job Corps) are needed.
- There was too much emphasis on listening skills (Michigan Language Program), which students already have developed highly because the school situation demands it (junior high level).
- Students were bored with the Science Research Associates (SRA) kits, which they have had since elementary school (junior high level).
- Some materials teaching beginning skills (Durr-Hillerich work on word attack, for example) are too difficult for the student population (junior high level).

Despite these problems, reading teachers were generally pleased with the program materials. Several praised the variety available, which made it possible to find something to fill almost any student's needs and to capture his interest. There were materials to challenge the better readers, yet all students could find something they could cope with. Singled out for praise were books (paperbacks, Dr. Seuss, Bright and Early books, etc.), Barnell-Loft (word attack, comprehension), Random House Skilpacers (comprehension), and SRA *We Are Black* (comprehension).

All of the teachers but one felt that the tape recorders were a distinct plus. Some teachers taped stories (accompanied by music) for students to listen to as they read them and gave each student his own tape to record stories on. One used them in conjunction with the Michigan Language Program and phonics work. Another class had also worn out a Hoffman teaching machine left over from the previous reading program and had obtained another one. The teacher felt it supplied the privacy that some students needed.

One teacher, however, disagreed with the majority view. She said that the directions given to the students by the taped programs were delivered too rapidly for the students to follow them. (She solved this problem by having aides *read the directions* to the students!) She also felt it was a waste of time for students to "read poetry into the tape recorder," as had been suggested, when they needed to learn basic skills. She said that the primary problem was that the students stole the equipment as soon as they saw it. She therefore did not allow students to use the recorders. On this point, another teacher said that some tapes and books had been stolen, but she guessed that less than $200 worth of materials had been lost.

PROGRAM TESTS

This section will describe the tests that are integral to the reading program. Tests given as part of Norfolk's evaluation will be discussed in the section on evaluation.

For prescription of study programs, Random House has constructed a Check-In Test that will test up to 500 objectives and will cost $900

for a set for 125 students that will be used in the program. This was not available at the beginning of the 1971-72 year, so a Basic Test of Reading Comprehension (BTRC) was given to place each student in one of three "subsystems," sets of objectives and matched materials. Teachers felt that this was an accurate device, although one teacher systematically placed students at lower levels than those indicated, to give them confidence. Another teacher felt that the BTRC should have tested more than comprehension. Teachers also used the Stanford Diagnostic Reading Test (DRT), which was used as part of the formal evaluation, to obtain further information on student weaknesses.

As each student finished his work on an assigned objective, the teacher was to give him a test ("check-out test") to see if he had mastered it. Some of these tests were not available in time, however; instead, teacher tallies of mastery of objectives were used as measures of student progress. Other tests were available without keys, and some test items were unreliable. On the whole, the teachers felt that these tests were adequate and thought the students actually enjoyed them.

One teacher felt that too much time was spent on testing. Since she did not allow her students to have the answer keys for their classroom work,* however, every assignment was like a test for them and the additional checkout tests were probably superfluous.

EVALUATION

For the evaluation, a control group was formed comprising *five*(!) students from each grade level at each school participating in the program. Students were to be randomly selected from among those who would have been selected for the program but had not been for lack of space.

In November, program and control students were given the DRT Form X, and in December, a sample of students in each group was given the Otis-Lennon Test of Mental Ability. Form W of the DRT plus an attitude inventory developed at Norfolk were also administered in May. The DRT was chosen because it measures objectives taught in the program. The Otis-Lennon was chosen because it had been normed on the same groups as the DRT.

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*So that they couldn't copy the answers.

By and large, the reading teachers found the DRT a helpful diagnostic instrument. Because it stresses vocabulary and word attack at the elementary level, elementary teachers expect a better showing on it than on the Metropolitan Achievement Test given last year.

The Norfolk City schools' testing group prescribed Level II of the DRT for the junior high level because the content of Level I was so babyish that it would turn the students off. The result was that in one class almost all of the scores were at the bottom, and little information was provided to the reading teacher. Another teacher noted that some students were marking the tests at random because they were bored or because they couldn't read the questions. This underscores the lack of appropriate materials for the mature nonreader.

TEACHER ATTITUDES

Probably the firmest indicator of the attitude of the reading teachers toward the program is that all of them wanted to continue in it next year. In fact, one teacher was going to desert the school she had been teaching in to follow the program to another school. Teachers found it rewarding to have the materials they thought the students needed, and believed the students were learning. This was true for even the teacher who had regimented her classroom. Most of the teachers enjoyed the open classroom and the opportunity it gave them to adjust to the students' academic and emotional needs.

STUDENT ATTITUDES

The High Intensity classroom atmosphere seemed positive and purposeful. Students were generally orderly and in many classes asked to be allowed to work longer, even after the bell had rung to close the period. They may have been responding to the added freedom and variety of the open classroom rather than to the materials, but the whole effect was healthy.

Teachers uniformly reported that students liked the program and were interested in the work. The students seemed actually to enjoy being kept busy at work they could handle and worked hard even in classes

where they got no grade* in reading. Teachers believed students were more interested, also, in their work in other classes and did more reading on their own. *These attitude changes were seen as the primary benefit from the program.* An assistant principal thought that the program even ameliorated some behavior problems because of the individual attention the students received.

We asked whether students resented being in the "dumb" class. One teacher felt that all of her students did so. However, another felt that the poorer readers didn't mind being in the class (which was borne out by the reactions of some of the nonreaders) and pointed out that students were not forced to be in the class and could withdraw, if they wished, to make room for others who needed the instruction. The better readers, however, were sometimes resentful. In addition, some seventh-graders had no choice in the matter.

STUDENT COGNITIVE GAIN

The Norfolk City Schools Department of Group Testing analyzed student cognitive gain in terms of differences in standard scores on pre- and post-administrations of the Stanford Diagnostic Reading Test. (Standard scores are similar to raw scores except that they have been adjusted so that the mean of the national norm is 50 and the standard deviation is 10.) Level I was administered to students in grades 4, 5, and 6, and Level II to students in grades 7, 8, and 9.

The results are summarized in Tables 3 and 4. Table 3 presents pre-post comparisons for each of the subtests in the DRT Level I. Note that all of the standard score differences for the treatment group were significantly different from zero, whereas only the score for the *blending* subtest was significantly different from zero for the comparison group. The scores on *beginning and ending sounds* for the treatment and comparison groups are nearly the same, but the former is significant and the latter is not because of the large size of the treatment group and the small size of the comparison group.

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*Eighth- and ninth-grade classes were graded because reading replaced a subject required for graduation.

Table 3

COMPARISON OF STANDARD SCORE DIFFERENCES FOR ELEMENTARY STUDENTS IN THE 1971-72 PROGRAM (Stanford Diagnostic Reading Test--Level I Grades 4, 5, and 6)

Subtest	Treatment (397 students)	Comparison (45 students)	Between-Group t
Reading comprehension	5.64[a]	1.96[b]	2.68[a]
Vocabulary	2.88[a]	0.86[b]	1.52[b]
Auditory discrimination	4.11[a]	2.39[b]	1.15[b]
Syllabication	4.47[a]	2.60[b]	1.16[b]
Beginning and ending sounds	2.60[a]	2.73[b]	0.09[b]
Blending	6.12[a]	6.40[a]	0.22[b]
Sound discrimination	4.03[a]	2.30[b]	1.26[b]
Composite	4.26[a]	2.74[b]	1.07[b]

[a]Significant at the 0.01 level.

[b]Statistically not significant

The *between-group t* shows that the two sets of differences differed significantly from one another only for reading comprehension. Thus, it is still not possible to say that the LRA approach is clearly more effective in teaching general reading skills. On the other hand, reading comprehension was the weakest area in the LRA program at the elementary level during 1970-71 and is probably the most important single aspect of reading skill. Hence, the program has been improved since that time.

Table 4 presents similar data for students at the junior high level. The same general pattern seems to be repeated, although the significant differences between the two groups arise in the areas of *vocabulary* and *rate of reading*.

Table 4

COMPARISON OF STANDARD SCORE DIFFERENCES FOR JUNIOR HIGH STUDENTS IN THE 1971-72 PROGRAM (Stanford Diagnostic Reading Test--Level II Grades 7, 8, and 9)

Subtest	Treatment (304 students)	Comparison (38 students)	Between-Group t
Reading comprehension	2.39[a]	0.0[b]	1.43[b]
Vocabulary	6.36[a]	2.58[b]	2.04[c]
Syllabication	3.67[a]	2.09[b]	0.81[b]
Sound discrimination	2.30[a]	2.85[b]	0.30[b]
Blending	5.82[a]	3.05[b]	1.84[b]
Rate of reading	8.73[a]	1.35[b]	3.70[a]
Composite	4.88[a]	1.99[b]	1.61[b]

[a]Significant at the 0.01 level.

[b]Statistically not significant.

[c]Significant at the 0.05 level.

PLANS

Norfolk plans to expand the program again for the 1972-73 school year. Five more centers will be installed at the junior high level (Blair will have two centers) for a total of ten, and the five centers at the elementary level will be moved to the upper elementary schools comprising grades 5 and 6. Avent supported the increased emphasis on the upper grades (no students from grades 3 and 4 will be in the program in 1972-73) with the argument that younger students require too much individual assistance.

Thus, the program was once again scheduled for expansion despite the lack of hard supportive data in the form of significantly better gain scores. When asked why, one person responded that it was because the Assistant Superintendent of Instruction likes the program and has

been sold on it from the beginning. This judgment seems unfair, even though it may be partly true. The obvious improvement in classroom ambience, the unanimous support of the program by the reading teachers, and the improved efficiency of resource use (even with the added aides at the junior high level) can hardly be discounted, especially where there is no evidence that students are performing any *worse* than they did before.

Next year several steps will be taken to improve the materials at the junior high level. Only a part of the Michigan Language Program will be used and the Educational Development Laboratories study kits, which are beyond junior high students, will be dropped. *Scholastic* books, presumably for elementary students, have been successful at the junior high level and will be substituted for *Landmark* and *Gateway* series, which are too long, use difficult vocabulary, and require too much writing. Cohen has updated the program by incorporating an "audio reading progress laboratory" from the Educational Progress Center, more Random House materials, and more SRA materials for the junior high level. In spite of these additions, the materials will cost the same as previously because of the deletions.

The high cost of the Random House Check-In Test ($900 for a set for 125 students) encouraged Avent to use the DRT as a diagnostic instrument instead. The Sequential Test for Educational Progress will be used to measure cognitive gain. Another change will be the use of a larger comparison group, which will help improve the comparability of scores.

CONCLUSIONS

The 1970-71 performance contracting program with LRA has led to a considerably expanded remedial reading program in Norfolk. This program is based on the materials and methods originally synthesized by LRA, particularly with regard to use of the diagnostic-prescriptive approach for individualizing each student's course of study. Teachers no longer have direct contact with LRA personnel, however, with the result that there have been modifications of the program in general and in particular classrooms. One modification is significant in terms of the cost of the program--the use of two aides instead of one at the

junior high school level. The other has to do with the variations in classroom practice occasioned by differences in teaching style among individual teachers. Whether these variations have significantly affected the results of the program in terms of student test scores is unknown.

Thus, one of the major effects of performance contracting may be that it is a means for assuring uniformity of teaching method and content from classroom to classroom. The most significant effect of the program, as far as staff and students are concerned, is the noticeable improvement it seems to have made in student attitudes toward reading.

III. TEXARKANA, ARKANSAS

INTRODUCTION

The pioneering Texarkana performance contracting program has evolved into an in-house effort. In 1971-72 the Texarkana Dropout Prevention Program in Texarkana, Arkansas, and Liberty-Eylau, Texas (or as it is called in Texarkana, the Title VIII program), drew funds from various sources in addition to Title VIII of the Elementary and Secondary Education Act. The 1971-72 program amalgamated money from Title I (teacher aides in the laboratories), Model Cities (elementary grades), and Title VIII (high school classes).

The 1971-72 program consisted of six special reading and math laboratories, "basic classrooms" (formerly called turnkey classrooms), a vocational orientation class for sixth-grade students, and various ancillary services including curriculum development, in-service training, and community contact workers.* We shall discuss each major element briefly and then comment on the likely future of the program, the impact of the former performance contracts on the 1971-72 program, and other impacts on the Texarkana schools.

THE 1971-72 PROGRAM

Clinics and Laboratories

There were nine special clinics or laboratories in operation serving 484 students. The goal was to have approximately 100 students per center. The clinics could handle about 10 students per period and the laboratories about 20. The student assignment criteria were the same in 1971-72 as in earlier years.† The 1971-72 centers resembled the 1970-71 centers under EDL cognizance. They used EDL machines and materials; however, some materials that had been used in a consumable mode in 1970-71

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*For a full description of the program, see L. H. Roberts and D. C. Andrew, *The Texarkana Dropout Prevention Program, Mid-Year Evaluation Report*, Region VIII Education Service Center, Magnolia, Ark., February 29, 1972.

†These criteria were: IQ score of 75 or more and two or more grade levels deficient in reading and mathematics.

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were adapted to be nonconsumable. EDL was not involved in 1971-72 except as a source of materials purchases for replacement purposes.

The junior high and high school laboratories were primarily remedial, while the elementary clinics involved more diagnostic activities. In particular, the clinics have been interested in detecting and assisting children with perceptual difficulties. The clinic at the Washington Sixth Grade School has a different function; it enrolls children who do not qualify for the Rapid Learning Center because their IQ test scores fall below the cutoff point.

In comparing the 1970-71 and 1971-72 centers, two major changes stand out. First, in 1971-72 a wider variety of materials was used. Second, there was less emphasis on the teachers and students covering a set program of material in a set period of time. Teachers made more use of movies, newspapers, and other materials and slowed down the pace or repeated material if they desired. The teachers who were interviewed favored both of these changes because they felt under less pressure.

Basic Classrooms

Texarkana uses a 3- and sometimes 4-track curriculum system. Originally, the three tracks were called advanced, regular, and basic. In 1971-72 the basic track in the schools involved in the Title VIII project was replaced by "basic classrooms." These classrooms also replaced the turnkey classrooms used in the 1970-71 program. There were 21 basic classroom teachers. During the summer of 1971 there were several workshops that displayed materials from different manufacturers. The teachers selected materials and were assigned aides to help prepare them for use in their classrooms.

The basic classrooms that are part of the Title VIII program have supplementary types of materials that were not available before. This seems to be the major difference from last year. Only in isolated cases are Dorsett materials being used, and then only by the special education teachers and occasionally in adult education. Use of EDL materials and procedures is largely limited to the laboratories.

The students in the basic classrooms had not necessarily graduated from the laboratories or clinics. Nor had the basic classroom teachers been involved with the Dorsett or EDL programs. In fact, only one of the teachers has had much contact with the performance contracting programs.

Vocational Orientation

Students at the Washington Sixth Grade School receive 12 weeks of vocational orientation instruction as part of the 36-week social studies program. One-third of the student body is rotated through the program at a time. The goal is to increase the students' occupational awareness before entering junior high. The school system has decided that the usual high school vocational orientation programs need supplementation, and attempts to improve the students' information and attitudes toward careers must be made earlier in their schooling.

Curriculum Development

During 1971-72, representatives of the schools composing what Texarkana calls its Title VIII "model subsystem"--College Hill Elementary, Washington Sixth Grade, College Hill Junior High, and Arkansas High--formed a curriculum study committee, whose task was to produce a curriculum guide for individualized instruction in math and language arts for grades 1 through 12. The teachers met each Monday evening for three hours and received a stipend for participating. The basic accomplishment of the committee was a scope and sequence objectives keyed for each grade level for each of three ability tracks. The committee had hoped to develop guidelines for choosing methods to diagnose student needs and to prescribe materials and instructional methods, but time did not permit. The Texarkana administration takes great pride in the accomplishments of the committee and believes that its efforts have been well received by the teaching staff.* We noted, however, from a questionnaire submitted to the teachers who had reviewed the committee's report that a few felt that the objectives were too ambitious for their students.

In-Service Teacher Training

Training consisted of a program of workshop sessions in individualized instruction and behavioral modification techniques. Occasional

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*The evaluators reported that 98 percent of the 170 reviewers felt that the committee's results gave "Excellent" and "Adequate" ratings. L. H. Roberts and D. C. Andrew, *The Texarkana Dropout Prevention Program, Third Operational Year, 1971-72*, Region VIII Education Service Center, Magnolia, Arkansas, July 15, 1972, p. 95. (Hereafter cited as *Final Evaluation Report, 1971-72*.)

guest lecturers were invited. Teachers who attended the sessions received a stipend.

Community Contact Workers

There were 11 home contact workers assigned to the project. They visited the homes of students who were not attending school or showed signs of other problems. The contact workers also made periodic visits to the homes of students who did not show signs of difficulty. This component of the program was established because students with academic difficulties often have special home problems.

REACTIONS TO 1971-72 PROGRAM

In comparison with the 1970-71 program, one laboratory teacher felt that in 1971-72 there was less pressure to cover a specified amount of material in a specified period of time. In 1971-72 the students in the laboratories spent three days of the week working on the EDL materials used the previous year as well as SRA materials that had been added to the curriculum. During the other two days they engaged in directed or free reading and occasionally, about once a month, attended movies sponsored by the high school English Department. The teacher also expressed a feeling of being less ostracized by the other teachers. Apparently in 1970-71 he had been the object of some hostility.

Another teacher expressed even stronger opinions. She stated that she much preferred the 1971-72 program to the EDL program. She said she "hated" performance contracting because of the pressure that it placed on the teacher. When asked for more details, she answered that in 1970-71 the component manager would announce that in two weeks' time he would test, say, cycles 10 through 20 of the EDL material; she would therefore have to rush through the cycles. During 1971-72 she could go back and redo cycles if she felt they were unsatisfactory, or not worry about how fast she was getting through them. This helps the classroom too, she said, because when a teacher is under pressure the children feel it. She said she "loves" the SRA materials and the children "love" the SRA materials because they can respond; in the regular classes they cannot respond because they are always behind. She dislikes the Iowa

Test of Basic Skills (ITBS) because, in her judgment, it does not accurately measure what the students are doing. She also criticized the testing procedure. In 1970-71, she stated, the examiners herded the students to the cafeteria and administered the tests to a large group. She believes that slow learners, such as the students in the laboratories, do not understand directions unless they are repeated a number of times and, thus, the evaluation did not measure what was being learned. She is using the Botel Test for evaluation in accordance with Texarkana school practice; but she is also using some other evaluation instruments to get further information she wants. She used the Sullivan Placement Test for arithmetic when the students entered her laboratory. She gave the same placement test at the end of the program and computed where the students would be were they to have entered the program in May. The computed difference is her own measure of success. The teacher noted a positive change in the attitude and manners of the children.

Another teacher told us that her group reads the newspaper *You and Your World* every Friday. Use of this newspaper started in 1971-72 to break up the "cycling," as the teachers and students call the EDL material. The teacher explained the lack of achievement score gains on the ITBS as due to the length of the test; she says that her students have a mental block about long tests. There was not much difference between the 1971-72 program and EDL's program the year before, she said, except that math and reading are no longer combined. She stated that there were less discipline problems this year. She also said that the other teachers had been jealous of her small class and the new material.

An interesting perspective on the 1971-72 program was provided by Robert E. Kraner of EPIC Diversified Systems Corporation of Tucson, Arizona, the educational auditor for the program. In Kraner's opinion, the 1971-72 evaluation design was good and the design for the forthcoming 1972-73 year was excellent. He feels that it takes about three years for a program to develop an efficient evaluation. The key element, in his view, is internalized objectives. In the first year of a program, objectives delineated in the evaluation design are not likely to match the objectives conceived by the operating personnel. In the 1971-72 Texarkana program, in contrast, Kraner stated, "You can look at the objectives in the evaluation plan and compare them with the files maintained by the operating personnel, and you find a very high match."

Kraner regards this as evidence that the evaluation activities match the program activities. He also stated that it made it easier to audit the program because one could merely check files and records and the material was either there or not, obviating an elaborate translation from project data on evaluation data.

Kraner stated that the testing he observed in 1971-72 had been the best job of teacher-administered testing he had seen. He is generally a defender of using achievement testing in evaluation. In addition to the ITBS, extensive use is being made of the Botel Test. It has become the prime diagnostic and evaluation instrument for reading for the Title VIII program. Kraner summed up how the 1971-72 program has changed from earlier programs with three points: First, the evaluators are obtaining relevant data; second, testing has improved; and third, there is more communication between evaluation and program improvement. He stated that there is more understanding by the teachers of how they are being evaluated, and that a lack of such understanding accounts for much of the apparent failure of Title I programs.

We asked about the 1971-72 evaluation activities of the Region VIII Center in Magnolia. Kraner stated, "It is doing less and less, which is good." The evaluator in this kind of program, he said, should work himself out of a job. The evaluators are less involved in implementing the program and project personnel are more autonomous, which he regards as a sign of success.

EPIC's role will not change basically in future years. However, the program is now much easier to audit. Kraner stated that he can now do in one day what used to take several days, because he can go through the files and get the data for easy spot checks.

Program Outcomes*

The 1971-72 program did not achieve its stated objectives. We will not repeat all the 20 major findings† but merely list four outcomes that illustrate the results:

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*We discuss only what the evaluators call "product outcomes." For information about the process evaluation finding see the *Final Report 1971-72*.

†Ibid, pp. 93-96.

- One objective was to decrease the dropout rate. Instead the rate increased slightly from 5.44 percent in 1970-71 to 6.80 percent in 1971-72.

- Attendance did not increase but decreased from 94.2 percent in 1970-71 to 93.4 percent in 1971-72. Attendance of program participants was slightly worse than the average attendance at all target schools.

- One objective for the labs was to assist 75 percent of the students to make one grade level gain or more. Actual percentages of students making such a gain were:

  -- Reading comprehension 38
  -- Arithmetic 28

These figures represented increases over 1970-71 results of 14 percentage points for reading and 4 percentage points for arithmetic.

- The objective for the basic English classes was one grade level or more gain for 75 percent of the students. Actual percentages of students making such a gain were:

  -- Reading comprehension 41
  -- Arithmetic 31

The evaluators concluded that:

> Since none of the expected outcomes for the overall program was achieved, it appears that the standards of acceptable performance set by the objectives were not realistic, or the dropout prevention program seems to have little effect on the total school program.*

*Ibid, p. 98.

The associated recommendation was:

> It is recommended that in the 1972-73 program the standards of acceptable performance expressed in each objective be reasonable and realistic, based upon baseline data from previous years' experiences and the judgment of teachers in the program.*

It should be noted that the objectives were either some absolute standard--such as 75 percent of the students making one grade level gain or better--or defined in improvements from the previous year. This evaluation approach leaves unanswered the question of how the outcome of the program compared with the probable results in the absence of a program. To deal with this issue would have required a cross-sectional control group which was not used in the Texarkana program. How one sets a reasonable set of standards in the absence of some control group is an extremely difficult problem as the Texarkana experience indicates. Nonetheless, it is clear that in terms of the impact on achievement test scores the first three years of the program have failed to make the substantial impacts that had been hoped for.

THE FUTURE OF THE PROGRAM

The Texarkana Dropout Prevention Program had been initially planned as a five-year effort costing $1.5 million. The planned time phasing was $270 thousand for the first year, $311 thousand for the second, a peak of $420 thousand in the third year, and a leveling off to $290 thousand for the fourth and fifth years. Because 1973-74 will be the fifth and under present arrangement the last year, the future of the program is in question. We explored the likelihood that program expenses might be picked up by the local school boards. Cognizant officials think that this would be unlikely. Parts of the project could be continued since the hardware has been paid for and the software costs are not large. However, even a bare-bones program would cost at least $150 thousand a year. This is equivalent to five mills on the Texarkana, Arkansas, tax rate. Officials do not believe that the taxpayers would approve such an increase for a special instructional program.

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*Ibid, p. 97.

Despite their pessimism about the likelihood of local financing for the program, officials are optimistic about continuing the various activities. They believe that various federal or state programs will provide an opportunity not only to continue but also even expand some of this year's efforts. The current view is that any educational innovation that looks promising must be attempted, even if there is no guarantee of long-term financing, and if the program works out the financing will probably work itself out. There is no expectation, however, that the number of laboratories or clinics will expand. Nor is there expectation that the materials and techniques used by the performance contractors will be adopted widely in standard classrooms.

PERFORMANCE CONTRACTING AND EDUCATIONAL CHANGE

Texarkana officials unanimously insist that former performance contracts served as change agents leading to a number of innovations in the Texarkana schools. They argue that, first, performance contracting has changed thinking of teachers and officials; second, it has developed administrative skills useful in other projects; and third, it has led to a number of improvements in Texarkana's educational program. We pursued this subject in some detail because the technology and techniques of the performance contractors have not been widely replicated or adopted in Texarkana classrooms and also because the 1971-72 program did not seem to be unusual compared with compensatory education programs elsewhere.

Several administrators and teachers offered explanations of the relationship between performance contracting and change. First, performance contracting has led teachers to be less conservative about educational change. The Title VIII program forced them to perceive that there were other ways to teach besides the old methods they were using. In addition, the program has allowed Texarkana to upgrade its in-service training. The result of this combination is that as teachers are exposed to new ideas, they become more receptive to educational innovations. An administrator stated that this benefit was the number one achievement of the performance contracts.

One of the teachers told us that during the last 12 years the Texarkana schools have had to deal with a greater variety of needs than ever before, and she felt that the Title VIII program had reinforced the teachers by providing more materials and instruction. She also emphasized that teachers were more receptive to new materials because of the performance contracts; they felt less threatened by new materials since they had seen others using them. Teachers also tend to be more interested if they see other people making changes.

The second explanation of the way that the program had been a change agent was that it had forced administrators to think in system terms. One administrator said that when he had been a principal he just went ahead and did things as he thought of them. The Title VIII program had forced him and other administrators to articulate their objectives on developing plans to obtain the teachers and other resources required and organizing the resources into a coherent project. Moreover, the fact that the program was evaluated meant that someone was "holding his feet to the fire." He felt that this had been a valuable experience. Superintendent Trice independently made a similar point. He stated that the Title VIII program had given Texarkana the experience not only to obtain funding for other special programs but also to be able to manage these programs.

The question naturally arises of why one needs performance contracting or Title VIII funds to accomplish these changes. Wouldn't any special program do as well? This question was addressed to an administrator who argued that Texarkana would not have made the changes without the Title VIII funds and the performance contracting. He maintained that the Dropout Prevention Program had led to an improvement in the total school program, citing as examples the curriculum revision, the basic classrooms, and in-service education. He stated that Texarkana, Arkansas, was spending about $500 per child, whereas Texarkana, Texas, was spending about $700 per child. Arkansas has to compete with Texas for teachers and therefore the Arkansas schools find it difficult to finance improvements as in-service education except through federal funds. He stated that the school could not have had the basic classes and the curriculum revision without Title VIII. First, he explained,

in Texarkana they had had better leadership in the Title VIII program than in the usual school program because it was a special program with specialized leadership requirements. The most important thing, he said, is that Title I has become so highly categorical that it is hard to live under the Arkansas guidelines and still have any kind of innovative program. For example, when the poorest child in school comes to class barefoot on the coldest day it is not possible to buy him shoes unless he has a teacher funded by Title I. Title VIII has a broader perspective, he continued, and the model subsystem therefore could be more innovative. Also, under Title I it is hard to plan ahead because of changing laws and guidelines, whereas in the Dropout Prevention Program Texarkana could plan more effectively.

The administrator's basic position is that Title VIII programs were sufficiently flexible to permit a major change in procedures such as performance contracting and this, in turn, had led to a number of ancillary activities that were having system-wide impacts through curriculum changes, in-service training, and other services. It still remains unclear, however, why performance contracting was as important a factor in providing administrative flexibility as the Texarkana officials feel that it was.

Superintendent Trice told us that he felt the performance contracting program had been a great achievement. Everyone in the system was more creative and innovative because of it. He also felt that Texarkana had been successful in keeping children in the school. Martin Filogamo, the Project Director, thought that Texarkana was not going to see much further improvement on this score. Once down to the current 4-percent dropout rate, he questioned whether you could go any further.

When Trice was pressed on what evidence there was that performance contracting had led to a change in the teachers, he cited the Follow Through Program in which Texarkana participated. He stated that at one time teachers would have been very resentful of such a new program. But when the possibility arose to participate in Follow Through, teachers were very interested, and a group was sent to three states to examine programs. The teachers selected the Pittsburg program. As another example, Trice cited the Title III program in which Texarkana is

currently attempting to develop an innovative program involving career education as early, perhaps, as the third grade. He argues that the teachers have a changed attitude toward such programs.

SUMMARY

The 1971-72 Dropout Prevention Program involves special reading and mathematics clinics and laboratories, new materials and support for students in the lowest ability track, in-service training, and other services. The project is the result of much effort by the Texarkana schools and represents a significant improvement in their program. Texarkana rightfully takes pride in the innovative character of the program and its content.

It is useful, however, to distinguish between the content of a program and the way it is organized, that is, the manner in which the educational services are delivered.* In 1969-70, and 1970-71 when the contracts with Dorsett and EDL were in effect, the Texarkana program involved a very unconventional way of organizing educational programs as well as atypical material and instructional techniques. In 1971-72 the content of the program was still designed to include new materials and techniques, however, the "delivery system" or program organization was similar to that used in many special school programs.

Texarkana officials support the proposition that performance contracting was a change agent. They cite various examples, including a curriculum revision program funded by Title VIII, in-service training programs, and participation in other programs such as Follow Through. They argue that these efforts would not have been undertaken had not teachers become more aware of the opportunities for change and the need for change, thereby becoming less conservative and more open to innovation. These changes, they believe, were a concomitant of the performance contracting program. Title VIII, they state, provides a flexibility to experiment that is not present with Title I funds and similar funding sources.

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*This distinction has been urged by Dennis Young of the Urban Institute, Washington, D.C., in *Evaluation of Organizational Change: The Case of Performance Contracting*, a paper prepared for the 28th Congress of the International Institute of Public Finance, New York, September 12-15, 1972.

When performance contracting was first introduced into education with the start of the Texarkana program there was much discussion about its potential as a change agent. One of the hopes at that time was that it would be a way of introducing into school systems integrated systems developed by contractors. This has not happened in Texarkana. The changes cited above are not extensions of the Dorsett or EDL systems. The EDL system remains, with some modifications, in operation in the labs and clinics but further applications are unlikely. The Dorsett system is receiving only isolated use in Texarkana. There appear to be no plans to replicate or apply broadly the contractor systems. Texarkana would like to continue the labs and other components of the present program when the Title VIII money and other funds now supporting the project run out. Such continuation, however, appears dependent on federal or state support. The odds for support from general school funds are low.

The Texarkana evidence is that performance contracting has not been a change agent in the sense that it has led to widespread turnkeying of contractor developed technology. It has been, however, a change agent by providing Texarkana with an opportunity to interest teachers in educational innovation and providing Texarkana with an opportunity for various experiments.

IV. GARY, INDIANA

THE 1971-72 PROGRAM

Banneker School opened in September 1971 with 707 pupils and 28 certificated teachers. With this pupil-teacher ratio, the average class size fell within the terms of the collective bargaining agreement between School City (the Gary public schools) and the Gary Teachers Union, but the program involved significantly more than the 21 or 22 teachers with which Behavioral Research Laboratories (BRL) had started the prior year and about 100 fewer students. The 1971-72 program must have been more expensive for BRL than had been anticipated in 1970. This assumption is reinforced if one assumes that only about half of the students or less will qualify for achievement payments. This appears to be a more realistic assumption than the 100-percent figure announced as a program objective.

Enrollment dropped from the approximately 800 enrolled in 1970-71 to 707 students in 1971-72, 530 from the Banneker area and 177 from outside.* The contract calls for a minimum enrollment of 700 and speaks of an "assumed" enrollment of 800. Apparently there are several reasons for the decline. School enrollment is down throughout Gary. Decline in steel demand raised the unemployment rate in Gary during some periods in 1971-72 to 53 percent, leading to some outmigration. Demographic changes have reduced the school population around Banneker.† Most of the transfers from the program have been because of family moves. It appears that much of the decline in enrollment reflects changes not related to the Banneker program. However, it is obvious that the program

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*Charles Young, Jr., "Attitudes of the Banneker School Community in Gary, Indiana, Toward a Performance Contract Program," Ed.D. thesis submitted to the Graduate College of the University of Illinois at Urbana, Champaign, Urbana, Illinois, 1972, p. 108 (unpublished).

†Young states that the Banneker attendance area consists of two parts. The northern part is mostly populated by middle-income residents with small families and has a low turnover rate. The southern part of the area consists of low-income families, many living on farms. Population in this area is falling as better housing is opening up in other parts of Gary. (Ibid, pp. 104-109.)

is not appealing to enough Gary parents to draw sufficient students to fill the available seats. Young estimates that around 245 children living in the Banneker attendance area do not attend that school.*

Gary's financial crisis and a 22-day teachers' strike in the late spring of 1972, as well as the general decline in interest in performance contracting, moved Banneker away from the spotlight of publicity it had received during 1970-71. Nonetheless, according to Brian Fitch, the BRL Center Manager, the school had about 6500 visitors in 1971-72. Tuesdays and Thursdays were designated as visitor days, and each week two teachers were selected to host classroom visits.

Banneker continued to devote more time to reading and mathematics than is typical in Gary or other Indiana schools. The extra time was taken from the enrichment areas (music, art, and physical education).

The 1971-72 program differed from the 1970-71 program in two procedural respects: The children were not transferred from classroom to classroom as often as they were in 1970-71. The problem was that the children tended to get stacked up at the top levels, and teachers did not want to transfer into new classrooms. As a result, in 1971-72 students stayed in the same classroom all year and new materials were provided to them as they progressed. This represents a major departure from the theory of the initial program. There was also a minor change: The 20-minute module was not used, on the basis that with a more individualized program it was not needed.

A very important difference between the 1970-71 and 1971-72 programs was in school governance. As noted in our earlier study,† one unique feature of the 1970-71 program was the role played by the five master teachers in directing the school. During 1971-72 the new principal played a more traditional role as school administrator, and it follows that the role of the master teachers was more conventional.

The committee structure was revised. Instead of the curriculum managers forming one major committee with a broad cognizance over

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*Ibid, p. 108.

†G. R. Hall and M. L. Rapp, *Case Studies in Educational Performance Contracting: Gary, Indiana*, The Rand Corporation, R-900/4-HEW, December 1971.

school affairs, a variety of specialized committees was used, each composed of a curriculum manager and other teachers. Actually, it is imprecise to use the term curriculum manager, since in 1971-72 these teachers were designated as Department Heads. There were five departments: mathematics, social studies, science, language arts, and enrichment.

Differences of opinion on questions of discipline between BRL and parents appear to have been resolved. The current policy bans corporal punishment and encourages a humane atmosphere, but there is no attempt to obtain a highly permissive atmosphere, to which parents object. The program has been less successful in resolving differences between BRL and the teachers. The Gary Teachers Union remains critical of the program, but had many higher-priority concerns in 1971-72 and therefore had little to do with Banneker. Due to the drop in enrollment, a reduction in teaching staff would have been possible. The criteria that BRL wanted to use to select teachers for a reduction in force conflicted with the School City-Gary Teachers Union contract. After negotiations among the union, School City, and BRL, the matter was settled by cancelling the proposed reduction and retaining all teachers. The conflict, however, left some hard feelings at Banneker.

In general, the teaching staff remains divided about the merits of the BRL program. There is, however, faculty feeling that the BRL and School City administrations have not been sufficiently solicitous about, and responsive to, teacher views and suggestions.

The most significant change between 1970-71 and 1971-72 was the stress on curriculum development. In the spring of 1972 Brian Fitch emphasized to us that he believed the development of new and superior teaching materials was the essence of the program. This belief was reflected in the 1971-72 activities at Banneker.

BRL concentrated on program design and implementation in language arts and mathematics. Fitch indicated that the Sullivan materials used in 1970-71 are primarily oriented toward reading instruction and that BRL wanted an individualized total language arts program including an oral component, spelling, and handwriting. In the spring of 1971, BRL asked a group of consultants to write the objectives for such a program.

During the summer, 18 Banneker teachers worked to specify the learning activities to teach the different objectives. In language arts and math, the BRL objective was total individualization of the program.

In social studies in 1971-72 Banneker used the Allyn and Bacon materials. The goal was to develop a good format for small group instruction and to develop materials to supplement the Allyn and Bacon series. In science Banneker used the AAAS material, without addition or change, because BRL believed the materials were good and the teachers had been trained in their use. Fitch stated Banneker has not done very much with the enrichment areas, which are presented in a rather traditional way.

The language arts materials are being marketed nationally by BRL. School City will receive a 2-percent royalty. The development of mathematics materials is not as far along, but it also is nearing a point where BRL will market the system, paying royalties to the Gary schools. The superintendent hopes to develop a trust fund arrangement so that the royalties can be used for improvements at Banneker.

Concern about BRL's marketing plans was expressed to us. Some observers wondered whether the materials had been tested sufficiently and whether they might apply too specifically to the Banneker situation. Obviously BRL does not agree, and the decision to market is BRL's. Nonetheless, there is some uneasiness about the relationship of Banneker's program to BRL's marketing efforts. The negotiation of a royalty arrangement improved but did not completely eliminate this uneasiness.

THE EFFECT OF THE STRIKE

The 22-day strike in the late spring of 1972 was apparently unrelated to the American Federation of Teachers' disapproval of performance contracting but instead was a response to the financial crisis of the Gary school system and the school board's proposals to deal with it. Even though some of the lost days were made up, the school year was not long enough to satisfy the provision of the 150-day school year that the School City-BRL contract requires for the achievement "guarantees."

The first issue that arose concerned post-testing. Gary had a teacher strike in 1970 that had serious adverse impacts on achievement test scores. BRL argued that to post-test at the end of the school year

soon after the strike would be meaningless and even misleading. After discussion between School City and BRL, it was decided to cancel the scheduled post-test for payment and evaluation purposes. The Banneker students were, however, administered the same district-wide tests that all other Gary students received in the spring of 1972. Longitudinal comparisons of Banneker students with 1970-71 results on computation of pre- and post-achievement gains for 1971-72 will not be possible.

The second issue concerned how to arrange payments for the students who were graduating from the sixth grade in June 1972, as well as payments for those in the program for all three years. This question became intertwined with the issue of how to deal with the declining enrollment. Banneker only had 707 students in 1971-72, and it appears unlikely that in 1972-73 the contract requirement for 700 students will be achieved. At the time this report was prepared, the contract adjustment details had not been announced.

BANNEKER SCHOOL AND EDUCATIONAL INNOVATION

In exploring the issue of the relationship between performance contracting and educational change, we formed a somewhat complex impression. There is no likelihood that Banneker will be a model for other Gary schools. The controversy over the program and its results ensures against any simple replication in other schools. Banneker-developed materials and curricula might see some use in other Gary schools, but even here the diffusion will probably be limited. Gary principals share a "not invented here" syndrome and do not like to adopt another school's program without extensive modifications. Moreover, in Gary the cleavage between the black and white communities has led the white schools to regard programs developed in black schools as inappropriate to their educational needs. Consequently, although some components of the Banneker system may be adopted in other Gary schools, it is hard to see that there will be any widespread turnkeying.

Even so, Gary administrators argue with conviction that the program has led to some system-wide changes. One argument is that the approval of the BRL contract was a signal from the school board that innovation was highly regarded and would be supported by the administration.

Accordingly, school personnel sponsored a number of innovative programs or system changes and generally became more responsive to new ideas. Examples include a new program of in-service training during released time.

In an almost Hegelian dialectic fashion, the same people who argue that the Banneker program has been a force for change also point out that it may have made further change more difficult. First, as a result of the demands attendant on implementation of Banneker's program and the other new programs, the Gary school board has grown more interested in perfecting current programs and less interested in bold new ventures. Perhaps even more important, the Banneker program sensitized the Gary Teachers Union and the Indiana State Department of Instruction to the possibility of their interests being affected by new programs. Both are monitoring School City activities more closely. As a result of the Banneker experience, such groups are also likely to be more effective in any future disputes. Finally, the State Department of Instruction is sponsoring legislation that would give it more authority in any future dispute such as that over the BRL contract. In short, in the near future any program as atypical as the Banneker Curriculum Center may well have a harder time getting by the school board, union, and state education officials.

REACTIONS TO THE 1971-72 PROGRAM

Some general reactions of informed observers have already been mentioned. The reactions of two individuals have special interest and will be summarized here.

Sandra Irons, President of the Gary Teachers Union, stated that at the start of the program the union opposed Banneker on two grounds. The first was a general opposition to performance contracting, and the second was opposition to the way the program was implemented in Gary. After the program was accepted over its objections, the union concentrated on the question of the way it was implemented. During 1971-72 the union was involved in two disputes: The first was over the proposed reduction in staff that would have violated seniority arrangements: the second was over the validity of the 1970-71 evaluation report. The union prepared a report analyzing the evaluation report of the Center for

Urban Redevelopment in Education (CURE). The report criticized the lack of comparison or control groups. It also questioned why math gains were higher than reading gains.

On the basis of the union's analysis, Irons feels that the students who went into the program near or above the national norms did better than the ones who were far below these norms. She said that in the summer of 1971 several teachers worked on BRL's math programs. One such teacher examined the evaluation test to check whether materials covering the subjects being tested were included in the program. Apparently compound fractions, for example, were not included in the instructional material even though they were included on the test. It should be noted that before taking the full-time job as union president, Irons was a math teacher, and this area of the Banneker program is of particular interest to her.

The union still regards the program as differentiated staffing. Irons said there was supposed to be no merit pay, but it turns out, according to her, that the curriculum managers have more authority and freedom than the teachers. Some of the teachers complained that when class sizes were large, the curriculum managers did not do their share of the teaching. Some of the teachers felt that the aides were trying to control the classrooms, and conversely some of the aides felt that some of the teachers were trying to downgrade them. The Indiana State Department of Instruction has been talking about certifying the aides and requiring sixty hours of college instruction. Irons does not like this, but thinks that next year the State Department will specify guidelines for aides that will tend to upgrade the qualifications required.

Irons was asked about the drive to unionize aides. She stated that the union had more pressing problems during 1970-71 and had not been able to devote time to this issue.

Irons' summary opinion of the Banneker program is that it is just another innovation without much merit. She says that Banneker teachers are doing the same things that teachers elsewhere are doing without performance contracting. As long as school districts have the kind of financial problems that Gary has had, she feels they will have programs such as performance contracting, which are sold to the districts as money-savers.

The Banneker principal, Sherman Newell, saw BRL acting as a catalyst for change. He said that unfortunately the only times that changes occur in education are when they are brought in from outside. We asked him to distinguish between what he saw as positive changes and what he saw as negative changes or problem areas. Starting with the positive, he listed differentiated staffing, which includes the increased use of paraprofessionals in the classroom and a sophisticated departmentalized system of instruction that allows teachers to become specialists. He attributed to the Banneker program the introduction of the Allyn and Bacon materials into the social studies curriculum. He was impressed that the way Banneker is organized allows the principal to be the real instructional leader and fulfill the role of providing assistance to the teacher.

As to the problem areas, Newell stated that bringing in an outside agency is an affront to the local professional staff, with the implication that the administration thinks that the staff is not doing a good job. Most of the other problems he listed were in the area of "people problems." He noted that performance contracting is cognitive-oriented and thus there must be concern about ensuring attention to the affective areas. He said that when people are entrenched in traditionalism, it is hard for them to change: "If you do not really change them, what you do in an experience like Banneker is to show them some new strategies for coping with their professional problems."

SUMMARY

The teachers' strike in the spring of 1972 meant that the payments and evaluation plans for the three-year performance contract had to be revised. How this revision will be made and how it will affect the nature of the program had not been publicly released at the time this report was prepared.

The Gary performance contracting program has had three unusual features: First, BRL has had cognizance over the entire Banneker school, permitting more flexibility in scheduling, organization, and curriculum than is typical in other performance contracting programs. Second, the contract between BRL and School City provides for a three-year program permitting more time for program development than has been usual elsewhere.

Third, the program objective is to have all Banneker students performing at grade level in reading and mathematics; BRL is to receive no payment for students who after three years do not test at the national norm for their grade.

In 1970-71, BRL made a number of changes in the Banneker organization and governance. In 1971-72 BRL's stress was on curriculum development, and the organization and governance were more conventional. BRL's emphasis has been on development of improved curricula for language arts and mathematics.

The advantage of having a multiyear program, as well as the applicability of the achievement "guarantees," were called into question by the system-wide 22-day strike of the Gary Teachers Union. The loss of time meant that School City could not meet the contract requirement to provide BRL with 150 days of instruction time. The strike also meant that it will be difficult to compute the "success" of the program. Even before the strike, we were told by several knowledgeable sources that the goal of all students testing at grade level was utopian. More "realistic" forecasts, such as one-half or one-third of all students attaining grade level reading norms, were being mentioned both before and after the strike.

Unless the test results from the program are spectacular, it is unlikely that Banneker's program will be replicated in other Gary schools. Despite statements in the contract, informed observers expect that half or less of the Banneker students will qualify for performance payments, and it seems unlikely that such a result would be regarded as "spectacular." Therefore, it is unlikely that there will be much diffusion of the BRL program as a system. However, features of the system have been and probably will continue to serve as models for changes in Gary school procedures.

Gary officials believe that the program has been a force for change. The essence of their belief is that the program announced to Gary school teachers and administrators that the "name of the game" was innovation and indeed there was an appropriate response. However, another consideration was voiced, even by some of the officials who had used the above argument. The attention and publicity given the Banneker program may have made future innovations more difficult to implement. The

thinking here is two-part: First, the Gary School Board may be less willing to engage in another bold venture in the near future; second, the State Department of Education and the Teachers Union have become alerted, sensitized, and experienced in dealing with Gary innovations. They will, the reasoning goes, be more likely to monitor Gary's actions and block new programs of which they disapprove.

V. GILROY, CALIFORNIA

INTRODUCTION

Gilroy Unified School District (GUSD) had a performance contract with Westinghouse Learning Corporation (WLC) in 197[illegible]-71 for 103 students in the second, third, and fourth grades for both reading and math. The program was discontinued at the end of the 1970-71 academic year. There had been serious implementation problems, but many of the operating problems that had been encountered had been smoothed out, and a cooperative effort between the school district personnel and the WLC on-site director was resulting in program improvement. Enthusiasm of the staff at Eliot School, which housed the performance contract, was high at the end of 1970-71. The Eliot staff wanted to carry out its own resource center during 1971-72; however, the program was not funded because Eliot went on double session and no discretionary funds were available.

Despite termination of the WLC program, Gilroy had a performance contracting program during 1971-72. The principal of Rucker School adopted the Behavioral Research Laboratories' Sullivan Reading Materials and selected BRL's performance option for payment purposes.

REACTIONS TO THE 1970-71 PROGRAM

The Eliot teachers, the principal, the director of elementary instruction who had primary cognizance of the program, the director of special projects, and the GUSD superintendent agree that although achievement gains had fallen far below their expectations, the performance contracting experience had a salutary effect on the district. They assert that teachers are making more use of individualized instruction than they did in the past; teachers and principals are more receptive to trying innovations in teaching and in classroom organization, and teachers are more willing to have the results of their classroom efforts judged by the achievement gain of their students.

Teacher 1: The only negative reaction we encountered to the performance contract was from one of the two teachers involved in the 1970-71 program. She indicated that she is now very wary of programmed

instruction because she believes that the material is not suitable to the children she teaches. She felt that the solution to Gilroy's reading problem is to rely heavily on teacher-made materials when working with youngsters whose vocabularies are severely deficient.

Teacher 2: The second teacher felt that the performance contract had forced Eliot teachers to individualization of instruction. She said that the performance contract made the children more independent in the way in which they operated in the classroom, and that in 1971-72 most of the teachers in the school had contracts of some form or another with the children. They were also making heavy use of the Distar program, which they feel is good for bilingual students because there is constant teacher-child contact, and they believe it teaches children how to listen better.

Generally, teachers thought that Westinghouse had been thrust on them in 1970-71, although toward the end of the year most of the ill feelings had disappeared. The second teacher mentioned that Westinghouse should have had an educator and not a businessman as program manager. She thinks that the improvement in classroom instruction at the school in 1971-72 was largely a result of the Westinghouse experience. Teachers are, according to her, more child-centered and are providing much more individualization of instruction. They also made extensive use of games in both math and reading at Eliot School in 1971-72.

The teacher's final comment was that while the first- and second-grade results are often disappointing, what was accomplished in those two grades is often reflected in the third grade. As will be discussed later, this observation was supported by the results of the achievement testing at Eliot in the third grade this year.

The Principal of Eliot School: Robert Medley felt that there had been many positive spin-offs to his school and faculty because of the performance contract last year. Primarily, there is more individualization of instruction. The faculty has developed and implemented a diagnostic-prescriptive system in order to test, diagnose difficulties and strengths, and prescribe an instructional strategy for each student in the school. There is more openness toward new ideas on the part of the faculty. He noted that most of the teachers have been using some

form of individual contract with their students in both reading and math. In addition, certain teachers have been using some kind of tangible reward system (a feature of the WLC program), including items such as toys and candy, and other teachers have been using point systems.

Finally, Medley felt that he got many insights into the problems of how to measure teacher success in terms of achievement results. He feels that this will be useful to him in light of California's Stull Bill, which requires all school districts to implement a system of accountability that will measure teacher success in relation to the educational achievement of their students.

The Director of Elementary Instruction: Rodney T. Kelley also felt that there had been a good spin-off to the district from the WLC experience. He went to Eliot School with the results of 1970-71's achievement testing and asked what services the central office staff could provide to help teachers solve their problems. As an outgrowth of that conversation, the faculty decided to implement school-wide an individual, diagnostic-prescriptive system for all students. Although teachers leaned heavily on what they had learned from WLC, they also developed many of their own materials and bought others that they considered to be better than what had been used the previous year. Kelley indicated that the faculty may have wanted to show that it could indeed do better than WLC had done, and he felt that this was another positive spin-off.

Both Medley and Kelley discussed this year's achievement testing in glowing terms. They said that a substantial proportion of the students in the Title I program at Eliot School had made at least a month's gain for a month's instruction. While they both felt that it is difficult to definitely attribute change to any single cause because many innovations are being carried out simultaneously in the district, they did give Westinghouse a great deal of credit for having acted as a catalyst for change in the district.

The Director of Special Projects: According to Dave Downing, the WLC experience made teachers in the district more aware of, and more concerned about, academic achievement and the need to find ways of improving it. He feels that teachers are now more willing to be measured

by the achievement of their students, and are beginning to shed the notion that educational outcome cannot be judged by test scores. This has led to district-wide pre- and post-testing in every grade from kindergarten to the sixth. He said that in a school such as Eliot, 15 or 20 children were ordinarily recommended in each previous year for special classes because the teachers felt they were too difficult to handle in the regular classroom. The approach the teachers are now taking toward difficult children is to discuss the nature of the problem with the psychologist, and to seek his help in diagnosing the child's particular needs in order to find ways of helping him in the regular classroom.

Downing is still skeptical about the involvement of private enterprise in education. On the other hand, had the results at Eliot been different in 1970-71, he would have instituted as many performance contracts as seemed appropriate in the light of the district's needs.

The Superintendent of GUSD: Robert Infelise felt that performance contracting was one of the reasons that GUSD is finding an increasingly positive reaction on the part of teachers to the idea of accountability in the district. Teachers do not feel as threatened by the idea as in the past. Furthermore, they seem comforted by the fact that an outsider was not able to get better results than they have obtained. They are willing to face and to cope with the fact that there has not been great success in dealing with their population of students.

Infelise said that in dealing with Westinghouse the school found that there was difficulty in making the changes that all participants, including the program manager, felt would be beneficial to the program. Infelise ventured the opinion that WLC's structure locked the concern into a framework that sometimes prevented implementation of logical solutions to problems because WLC felt that it was necessary to "stick to the agreement." For example, early in the 1970-71 program, both the on-site manager and the program teachers wanted to change the class sizes. There was a long time lag before the switch was made because the decision had to be made at a central level rather than on site.

Infelise pointed out that Gilroy had entered into another contract, this time with the Sullivan Reading Centers Division of BRL. The principal of Rucker School negotiated the contract although it was signed by the superintendent. When asked how this performance contract came about, Infelise said that school officials are trying decentralization of authority in the district, with participative management by the principals. Budgets have also been decentralized so that each building principal has some autonomy in the way he spends his share of the funds.

Infelise also stated he felt that performance contracting was greatly influential in bringing about more individualized instruction throughout Gilroy.

THE 1971-72 PERFORMANCE CONTRACT

In January 1972, Mary Flautta, the principal of Rucker School, negotiated a contract with the Sullivan Reading Center of BRL to teach reading to thirty students in the Title I program. The 12 third-, 6 fourth-, and 12 fifth-graders who participated in the program were chosen by the teachers and principal as being the most in need of remedial reading help.

When asked why she had decided on a performance contract, and why she had chosen the Sullivan Reading Center, Flautta said that Sullivan materials had already been used in the school and proved successful. She also liked the fact that four of her teachers could observe the program and be able to help implement improvements on their own.

Under the guarantee, Sullivan supplied a teacher who worked with two groups of fifteen students each for an hour a day. Payment was to be made only for a student who has gained nine months, and the guarantee was voided for any student who did not attend at least 5/6 of the applicable portion of the school year.

The basic technique used by the Sullivan teacher was to work with the entire group of fifteen children for about ten minutes on a problem common to all the children. For the more advanced children, this was a period of drill, and for the less advanced, a period of new learning. Then each child worked on his own, and the teacher circulated to see what each child was doing, corrected mistakes, and supplied new materials to those who needed them.

When asked what the teachers who observed the instruction thought of the system, Flautta said that they had mixed reactions. They could see the possibilities, but felt it would be extremely difficult to implement in a classroom of more than fifteen children.

Only two of the thirty children made the guaranteed gain of nine months. The average gain for the twenty-nine students (one moved) was one month. Of the students in the program, fourteen gained, twelve lost, and three showed neither a gain nor a loss.* The teachers felt that the benefit of the program to the children was greater than that reflected by the gain scores, both in terms of learning and in the development of self-confidence.

ACHIEVEMENT AT ELIOT SCHOOL IN 1971-72

The results in 1970-71 were less than expected, but they were comparable with the normal Title I gains in Gilroy, and in some cases better. What was the achievement of the students at Eliot in 1971-72 without the performance contract? We obtained the results of the testing for 1971-72 for students in the third and fourth grades, but because different tests were used this year from last, it is meaningless to report actual scores. We did, however, compute reading and math gain scores.

For analysis of the 1971-72 results the students were divided into those who had participated in the WLC program last year, and those who had not. In reading, second-grade students in the WLC program gained 0.37 in 1970-71; in 1971-72 in the third grade these students gained 1.1 years. Nonprogram students in the second grade in 1970-71 gained 0.7; in 1971-72 the third grade exclusive of the WLC students gained 1.3 years. It should be borne in mind that the children originally chosen for the program were those most in need of remedial help.† Third-grade students

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*There are serious questions about the appropriateness of using a standardized achievement test to measure the effect of so short a period of instruction, and moreover to use such a test for a purpose other than that for which it was designed. For discussions of these problems see P. Carpenter and G. R. Hall, *Case Studies in Educational Performance Contracting: Conclusions and Implications*, The Rand Corporation, R-900/1-HEW, December 1971; and S. A. Haggart, G. C. Sumner, and J. R. Harsh, *A Guide to Educational Performance Contracting: Technical Appendix*, The Rand Corporation, R-955/2-HEW, March 1972.

†This point is emphasized by GUSD officials.

in WLC in 1970-71 gained 0.6; in 1971-72 in the fourth grade these students gained 0.76. Nonprogram students in the third grade in 1970-71 gained 0.2; in 1971-72 the fourth grade exclusive of the WLC students gained 0.6.

Note that the rate of gain for 1970-71's second-grade program students tripled the next year; for 1971-72's nonprogram students it almost doubled the next year. The students who had been third-grade program students in 1970-71 did only slightly better in the fourth grade in 1971-72, while the 1970-71 nonprogram students tripled their gains.

In math, the same pattern is observed. Second-grade students in the WLC program in 1970-71 gained 0.45; in 1971-72 in the third grade these students gained 1.2 years. Nonprogram students in the second grade in 1970-71 gained 0.7; in 1971-72 the third grade exclusive of WLC students gained 1.4 years. Third-grade students in WLC in 1970-71 gained 0.67; in 1971-72 in the fourth grade they gained 0.65. Nonprogram students in the fourth grade in 1970-71 gained 0.7; in 1971-72 the fourth grade exclusive of the WLC students gained 0.82.

In both reading and math, two interesting phenomena were observed. First, both former WLC students and students who had not participated in the program did extraordinarily well in third-grade reading in 1971-72; and second, none of the groups did better than expected in the fourth grade during the same period, with the exception of the group who had not participated in the program in the previous year who tripled their reading gains.

We cannot attribute changes during 1971-72 to specific events with any certainty. We can only speculate that the teachers in Eliot School did, indeed, benefit from the performance contracting experience. We were told by the teachers and by others that they were individualizing instruction, relying on a diagnostic-prescriptive approach, and trying hard to improve instruction. The results, especially in the third grade, could be interpreted as evidence that their efforts were successful. Why this was not true in the fourth grade is far from evident. In the past we have encountered similar situations in other school districts. Educators have speculated with us about the cause of "fourth-grade slump" and have offered two possible explanations: First, in the fourth grade most achievement tests switch from having students mark

their answers in the test booklet to using machine-scored separate answer sheets; second, many teachers clamp down hard in the fourth grade on the idea that school is for real, that the children are no longer to make a game of their work, and that education is a serious business. It is difficult for many youngsters to adapt to the new classroom situation and atmosphere. The hypothesis needs to be tested.

SUMMARY

Having a performance contract in Gilroy last year appears to have served as a catalyst for change in the school district. Teachers are implementing diagnostic-prescriptive procedures as a basis for individualized instruction; they are more receptive to trying innovations, and they are more willing to have the results of their classroom efforts judged by the achievements of their students.

VI. GRAND RAPIDS, MICHIGAN

THE 1971-72 CONTRACT LEARNING PROGRAMS

Introduction

The three performance contractors of 1970-71 were retained in Grand Rapids for 1971-72 with seven contracts covering learning centers in fourteen schools. Only three of the contracts (three schools) had guaranteed performance provisions. Contract provisions between the contractors and the individual schools are detailed below:

Table 5

CONTRACT LEARNING PROGRAMS,
GRAND RAPIDS, MICHIGAN: 1971-72

Contractor	Schools	Type of Contract	Maximum Contractor Fee ($)
CMES Learning Unlimited[a]	South Middle Coit Elementary Franklin Elementary Lexington Elementary Sibley Elementary Straight Elementary	Performance Fixed fee	120,000 150,000
Alpha II[b]	Alexander Elementary Fountain Elementary Hall Elementary Kensington Elementary	Consultation only	23,000
Alpha II	West Middle	Performance	52,000
Alpha II	Burton Junior High	Consultation only	6,000
Alpha II	Alternative Education Center (social rehabilitation)	Fixed fee	22,000
Alpha II	Coldbrook School (mentally handicapped)	Performance	84,000

[a]Learning Unlimited was organized as a corporation in the spring of 1971 when Westinghouse divested itself of its contracted instruction; apparently all of the Learning Unlimited personnel, at least at the operating level, came over from Westinghouse.

[b]Alpha, the contractor for 1970-71, reincorporated for tax reasons and was renamed Alpha II.

The programs at Kensington Elementary and Burton Junior High were for reading only, the program at Alexander used only the token economy, and the other programs were for both reading and math.

The programs in these fourteen schools represent a wide range of options for the evolution of a performance contracted program. The programs at South Middle and West Middle were essentially replications of previous performance contracting programs. The programs at Franklin and Lexington schools were replications of the first year, but with fixed fee rather than performance payments. At Sibley and Straight, the programs were replications of previous fixed-fee programs. Hall School had a turnkey program with some modifications in physical arrangements. Alexander School turnkeyed its 1970-71 program but retained very few elements of the original program. Coit, Fountain, Kensington, and Burton schools adapted programs that had been used in other schools with varying degrees of modification. Alternative Education (fixed fee) and Coldbrook School (performance payment) both represent novel applications of the program of a previous contractor. This diversity reflects the varying perceptions of needs in the different schools. It is also indicative of a district policy to encourage initiative at the building staff level.

CMES: South Middle School

The performance payment provisions were retained for a second year and there were very few changes in instructional format. The major change was in student selection. In 1970-71, participants were selected from the lower achievers of all four grades (six through nine). Last year, all sixth-graders and selected seventh-graders received reading and math instruction in the learning centers; selected eighth-graders received math instruction only.

The program will be turnkeyed in 1972-73, since CMES is going out of the performance contracting business. The district will buy all the equipment and software, and will negotiate for CMES-proprietary items such as diagnostic materials, prescriptive materials, and reading manuals.

The grade gains in 1971-72 for sixth-graders, who as a group were almost two years behind grade level at the first of the year, were only 0.3 in reading and 0.14 in math. Seventh-graders, who were over three years behind grade level, gained 1.7 in reading and 0.9 in math.

Learning Unlimited learning centers were operated in five public schools and one parochial school (St. Andrews Elementary) that was attached to the Grand Rapids School District contract to enable the parochial school to take advantage of the group rate offered by the contractor. The organization and operation of the learning centers differed only slightly from the original year. At Coit School, the regular teachers instructed their respective students in the learning center. At each of the other schools, a staff member was assigned exclusively to provide instruction in the center. Elmer Vruggink, Assistant Superintendent for Instruction, regards the latter arrangement as more "cost effective" but thinks that the nonparticipation of the regular teachers made them feel less a part of the program.

The contract specified achievement and interim mastery testing as modes of evaluation. The stated goals were that a full grade equivalent (reading or math) would be gained by 90 percent of the students who attended at least 160 sessions (reading or math), and that the average gain for each year of attendance would be 1.5 grade equivalents. Contract payment was not dependent on evaluation results.

Learning Unlimited offered volume rates. The 1971-72 schedule was:

First center	$34,500
Second center	$20,500
Third center	$18,500
Each additional center	$17,500

For the six learning centers (including St. Andrews), the average price was $21,000. This price included the instructional and motivation system, the diagnostic and prescriptive services, teacher training (pre-service and in-service), and ongoing consultation and administrative services. An additional $5000 per center was charged for educational and motivational materials. The fee was paid in ten equal monthly installments beginning August 31, 1971.

For 1972-73, one additional elementary school was added to the list of schools with Learning Unlimited learning centers. The new price schedule offered was substantially lower than that for 1971-72, ranging from $15,500 for the first school to $6000 for the eleventh school.

The additional cost-per-school for materials dropped somewhat to $4500. The average total fee was $14,000 per school and the services were apparently the same as in 1971-72.

Grade gain achievement was mixed for the several Learning Unlimited schools. With a few exceptions gains over the previous year (there was no fall pre-test) were generally in the neighborhood of 1.0. The fourth-graders at Lexington Elementary gained in the neighborhood of two grade levels (2.0) in reading and also in math. Lexington also scored a conspicuous success on the State of Michigan educational assessment, a state-wide testing program for fourth- and seventh-graders. The *Grand Rapids Press* (July 14, 1972) reported that Lexington's city-wide rating rose from 39th in 1970 to a tie for first place in 1972. The principal at Lexington attributed much of the success to the Learning Unlimited learning center.

Alpha II: Elementary

Alpha conducted a two-week workshop at the end of August 1971 to train teachers from schools that were planning Alpha learning centers. The fee for the sixty-hour workshop was set at $144 per participant or $17,640, whichever was greater. Price reductions were offered if participation exceeded 160 persons.

The workshop was planned primarily for teachers from West Middle School, Burton Junior High, and the Alternative Education Center; these programs will be discussed later. In addition, teachers from four elementary schools (Alexander, Fountain, Hall, and Kensington) were invited to attend by the district. The idea was to familiarize the teachers with the Alpha system and let them decide for themselves whether and how the program could be implemented in their respective schools. They were told they could adopt as much or as little as they pleased, and that they could proceed with the implementation at their own pace.

The teachers from Fountain and Hall chose to implement the complete Alpha program as it was in the OEO experiment, except in individual classrooms rather than in learning centers. This made the program somewhat more costly than before, because materials were split more ways and it was necessary to provide ongoing consultation to twelve teachers

rather than to four. Kensington adopted the complete program, but only for reading; Alexander opted for the token economy only, but tokens were used for all instruction, not just for reading and math.

Except for Alexander School, all contracted programs replaced regular programs. Remedial reading teachers were reassigned to work in the Alpha program.

According to Vruggink, the teachers, despite the ground rules, expected the program to be laid out for them. Some of the materials did not arrive until November because they were not ordered until the teachers had decided what to do. The situation was somewhat aggravated by the turnover of Alpha consultants. By spring, however, the programs were moving along, and all four schools wanted to continue the programs in 1972-73.

On-site Alpha personnel felt that the programs in the four elementary schools compared well with the preceding year, considering that sixty teachers were supported by one consultant, whereas in 1970-71 there were only eight teachers supported by an on-site manager. The teachers had to assume much more responsibility than anticipated and compromised the system somewhat. For example, Alpha reports that teachers did not use diagnostic elements as recommended, and sometimes the "rule book" was regarded too literally and students were moved ahead at slower rates than necessary. Some elements were simply not used, especially those that were late in arriving. Coordination became a big problem without the on-site manager, even though teachers had definite responsibilities. One Alpha employee speculated that, as of the end of the school year, 70 percent of the teachers were enthusiastic over the program, but the rest were still concerned because the system was new and there was too little consultation; the employee felt that teachers in the latter group had weaker innate management skills. There were a few instances where the teachers improved on the Alpha program, such as where quiet reinforcement activities were placed in the same room as instruction.

The fee for consultant support for the four schools was $22,791. This was paid in four equal installments in September, November, January, and June. Grade gain data for the four schools has not been made public.

Alpha II: West Middle School

The Alpha program at West Middle School essentially replicated the program of the previous year, except that the number of student units (one student enrolled in one subject) increased from about 600 to 800, and the program was not strictly remedial. About 240 seventh-graders were enrolled for reading only, and enough other students were enrolled for reading and/or math to complete the remaining 560 student units. When available, reading scores from the previous year's achievement testing were substituted for pre-tests. Grade gain in reading for the seventh-graders was less than half a year. Average grade gain in math for all three grades was somewhat less than a full year.

The payment provisions were complicated. Briefly, there were separate performance-based payment schedules for seventh-grade reading students and for "serious academic retardates" with good attendance records. The fee for the remaining 300 or so student units was fixed at $17,050. The maximum payment for all students was set at $52,000. There were three interim payments of $12,000 each (September, December, and March).

West Middle staff members have pressed to turnkey the program for 1972-73. They want the flexibility to institute modifications, such as allowing students easy entry to and exit from the program. Some of the concerns in the turnkey decision are increased remuneration for the person assuming leadership, additional supplies for more program flexibility, and relocation of the Alpha II office to nonpublic property. The school would continue to purchase student flow-charts from Alpha, and presumably would contract for consulting services in the same manner as the elementary schools.

Alpha II: Burton Junior High

Alpha established a reading skills program at Burton Junior High for 400 seventh- and eighth-graders, involving three teachers and two aides. Alpha provided all materials and student incentive funds for $5825. The comment was heard from several quarters that Burton had achieved the "model" program in terms of student achievement and behavior. One factor may be the attendance area. Burton's area is probably more middle class than the areas of the other schools with learning centers.

Average grade gain over the previous spring was about one year. The principal at Burton reported that the majority of the staff felt that the program could be turnkeyed and operated internally. The staff would like to use any savings from a turnkey operation to expand the program.

Alpha II: Alternative Education

Russell Hormelink is Project Director for Grand Rapids' Alternative Education Center. The Center is for male students who are behavior problems in the regular schools and who are wards of the juvenile court. The usual mix of school instruction is provided for 130 students, grades six through twelve. Entrance is voluntary (transfers from regular schools or dropouts over the age of sixteen) or involuntary (indefinite suspensions from regular schools and juveniles who are ordered to attend by a probate judge). A student is removed from the program if (1) he completes a contract that indicates he can be successful in a regular school, (2) he is too much of a behavior problem, or (3) his attendance rate is below 50 percent and he is more than sixteen years of age. The enrollment is limited, and there was a waiting list of forty students at the time of our visit.

For the 1971-72 school year, Alpha II contracted to provide instruction in reading and math with a program similar to that at West Middle School. A fixed fee of $5210 was charged to equip a reading room, a math room, and a free room, together large enough to accommodate 150 students. An additional $5 per enrolled student was charged at the end of each of 6 six-week periods. Alpha II paid for classroom materials, free-room materials, student rewards, and visiting Alpha staff, and on-site support was provided by the resident Alpha consultant at West Middle School. Grand Rapids provided classrooms, normal school services, and salaries for its staff. The Alternative Education Center staff members attended the Alpha II Summer Workshop during the last two weeks of August 1971. At the end of the school year, 115 of the 127 students in Alternative Education were attending Alpha's learning center. The total contract liability of the board of education for both the learning center and a social rehabilitation program was not to exceed $21,900, equivalent to the combined fees for a full enrollment of 150 students during each of the 6 six-week periods.

Robert Stark, who is the district's Director of Pupil Services and directly responsible for Alternative Education, was very positive about the Alpha II learning center program. He reported that contractual performance guarantees were ruled out because the district did not want the learning center to interfere with the flow of students in and out of Alternative Education, which usually takes place at the end of the six-week intervals.

Alpha II: Coldbrook School

Grand Rapids had a novel performance contract with Alpha II for reading and math instruction at Coldbrook School, a special school for the educable mentally handicapped (EMH). The district has three-year funding from Title III to "devise and implement a better educational model" for this category of student. The program is intended to provide a more adequate emotional and social adjustment for the students, to reduce the per capita cost of instruction, and to increase scholastic achievement. By the end of the three years, the program will be decentralized, and the approximately 150 students at Coldbrook will be accommodated in regular school buildings and in regular classrooms. The regular schools will have learning centers, but these will not be exclusively for EMH youngsters, as it is hoped the "special education" stigma will disappear.

The first year of the project was 1971-72, and the main objective was to develop better teaching methods in reading and math. Alpha operated learning centers for both reading and math. Each center was staffed by one teacher and two aides. Each student spent a half-hour per day in each center, plus a half-hour on each of the two subjects in regular classrooms. Tokens were used to reinforce good school performance and behavior in the learning centers and regular classrooms for work on reading and math. The tokens were redeemable at the "Alpha Store," which was open once a week, or were saved up for special recreational activities outside the school. Robert Whitecraft, the district's project director at Coldbrook, said that token rewards had been discontinued as behavior inducement after four or five months, when the need for this type of reinforcement diminished and the tokens became strictly a reward for academic performance.

There were 145 students at Coldbrook, from five to sixteen years of age. The average IQ was 59, and average grade gain had been only one or two months per year. Children were grouped into ten classrooms according to age, with a maximum of fifteen per room. The spread in a classroom was as much as seven grades, so there was a necessary emphasis on individualized instruction.

The contracted performance goal for each student was 1.5 years' achievement gain in each subject. For each such goal attained, Alpha was to receive $231.04. Payment would be $12.16 more or less than that amount for each 0.1 gain above or below 1.5 years. The maximum for any one student per subject was set at $291.84. The maximum payment (figured for 125 students) for achievement gain in reading and math was not to exceed $60,800. Alpha was also to be paid up to $7600 for each of the two subjects, depending on how students performed on interim performance objective testing; the contract was obscure on the formula for determining the exact amount. In any case, the maximum total for achievement gains and performance objective gains was $76,000. There were four interim payments of $10,000 each.

In addition to these fees, Alpha was provided $7600 before the start of the school year as "risk capital" for the development or modification of its program for the EMH students. Half of this amount was to be refunded at the end of the school year if the average grade gain was less than 1.5 years.

Pre- and post-testing were conducted using a wide-range (i.e., unilevel) achievement test; the test's exact identity was a secret until the end of the school year. Testing was conducted individually, rather than in group settings. The Coldbrook project adds another twist to the omnipresent problems of testing for performance contracts. There are no achievement tests normed on this type of student population. Whitecraft is working on a six-level test based on objectives provided by Alpha, but it will take several years to norm locally.

Other evaluation devices included self-concept tests. In May, questionnaires were used to solicit opinions on the project from parents, teachers, and students.

Whitecraft was very positive about the Alpha program, as was

everyone else on the district staff. Post-testing was not complete at the time of our site visit, but *Nations Schools* (September 1972) later reported that the average grade gains were 0.97 in math and 0.6 in reading. Beyond cognitive gains, there were very obvious gains in self-concept. Whitecraft said that teachers were initially opposed to the Alpha contract, but all except one were cooperating by the end of the school year.

The Coldbrook project used Education Turnkey Systems Inc. for management support. ETS wrote the contract between the district and Alpha, helped select achievement tests, and acted as a troubleshooter. Whitecraft said that management support was especially helpful during the trying first few months when materials were late in arriving and Alpha support was unstable.

GENERAL IMPACTS OF CONTRACT LEARNING

From the community standpoint, Henry Erb of Grand Rapids' Station WOTV reported that contract learning is not conspicuous among the many different educational programs underway in Grand Rapids. There has been little controversy about the contract learning programs.

There seem to have been impacts on the manner in which the district is operated, however, and these are discussed in the following paragraphs.

Impacts on Instruction

The impacts of the contract learning programs on instruction have been evident. The district appears to be actively pursuing widespread use of systematic approaches to instruction, and is not restricted to those approaches offered by the three former performance contractors. At Ridgemoor Elementary School, for example, a Westinghouse program for individualized instruction, Project PLAN, is to be initiated in 1972-73 for reading, math, science, and social studies. The program offers on-line diagnostic and prescriptive services via a computer terminal in the school building. The cost per subject is about the same as for the other contract learning projects. One district administrator expressed misgivings about such a comprehensive program. He doubted

whether individualized learning should necessarily equate with "individually prescribed at-your-own-speed learning." He felt there should be more group learning, and this is one reason why contract learning for individually prescribed instruction may never have widespread application beyond basic skills.

Central High, Ottawa Hills High, Union High, and Northeast Junior High have been planning programs for 1972-73 patterned after the learning center model. It is interesting to contrast the first two programs, which will be quite different from each other. These differences reflect differences in the administrators and their students, faculty, and attendance areas.

The Central High program is to be essentially remedial. Students with reading problems will be told they have not been doing well, and a rather bleak picture of their future in a literate society will be described but participation in the program will be voluntary. The design of the program will be influenced by observations made by Central High staff members inside and outside Grand Rapids. The Central High staff does not particularly regard this program as part of the contract learning activities in Grand Rapids.

Ottawa Hills High is a new school that draws from a white upper-class attendance area, but black students are bused in from poorer areas. Its program could not be remedial because most remedial students are from the bused-in group, and administrators did not want the program to accent racial differences. Consequently, all students will be involved in the program, but scheduling is to be such as to decrease the awareness of differences. As of May 1972, the school was favoring an Alpha type of program, but no decision had been made.

Individualized instruction at least in reading and math is now probably more of a reality in Grand Rapids than before the institution of the contract learning programs. In many cases, it appears that teachers have escalated their perceptions of self-efficacy. They are becoming aware of a broader range of tools available to increase student achievement. Remedial reading teachers, the traditional foe of contract learning programs, have been investigating contractor's techniques. In almost all cases, the initiative for implementing new contract learning programs in 1971-72 came from teachers.

Notwithstanding the Project PLAN program, it appears that there has been a certain amount of contractor entrenchment in Grand Rapids, and that current contractors have the inside track for new programs. They are sufficiently aware of the needs in Grand Rapids to submit proposals that are more specifically tailored to Grand Rapids than those of their competitors.

Impacts on District Administration

There was some doubt among the district staff that the performance contract experience had a direct effect on the district's administrative skills and practices. It may be speculated that if there were such an impact, it would be eclipsed by the impact of the freewheeling management style of Phillip Runkle, the new school superintendent. There appears to be a possibly related shift toward decentralizing responsibility among building principals accompanied by low-keyed accountability. For the first time, principals are being given discretionary money (about $10 per student) and told to use their management ingenuity.

David Thompson of the Grand Rapids Education Association feels that the performance contracting experience has increased the awareness of the board and staff of the value of in-service training as a means of getting teachers involved in their work and as a means of imparting information. He suggested that some administrators were surprised at the many cases of sustained high performance--as if the upper level of teacher performance had been underestimated in previous years. Thompson has been critical of the district's traditional training programs. The contract learning programs, on the other hand, have all been supported by professional consultation, and the contractors have taken this training function very seriously. A hopeful portent for the future is that the district appointed a director for in-service training last year. Joan Webster, Coordinator of Contract Learning, says this is a manifestation of the growing realization in the district offices that "accountability is a two-way street," and that the district is obliged to engage heavily in training and other instruction-supportive activities.

Joan Webster, who was the on-site director of the OEO experiment in 1972-71, became the district's Coordinator of Contract Learning for 1971-72. Two of the district's seven contracts: the Coldbrook contract and the Alternative Education Center contract, however, also had individual project directors.

Impact on Resources

Grand Rapids' increased involvement in contract learning has meant very little in regard to shifts in resource allocation. Except for South Middle School (CMES), no contract learning program required an increase in staffing. In some cases the staffing decreased. When a contract program replaced a conventional remedial reading program, the remedial reading teacher was usually assigned to the contract program.

Most of the contractor fees were absorbed by a Title I windfall. Because Title I eligibility reflects welfare rolls, the recent General Motors strike increased last year's Title I funding in Grand Rapids from $1 million to $1.3 million. Wallace Norgrove, the district's Director of Special Programs, was apprehensive that the Title I funding might decline 10 percent for the 1972-73 school year.

The district's funds were also bolstered by a sort of "reverse" performance contract with the State of Michigan. On the basis of the 1971 Michigan Assessment of Education, it was determined that 27.6 percent of Grand Rapids' students were below the fifteenth percentile state-wide in reading and math. This qualified Grand Rapids for an extra million in "State of Michigan Section 3" funding for three years. Each student must achieve a certain threshold of performance in reading and math in order to keep the funding level constant. Otherwise, funding will be decreased proportionally. This funding arrangement is a concept of State Superintendent Porter, who is a supporter of the performance contracting concept.

In all programs, teachers' salaries came from regular operating funds. Aides at Coldbrook School were paid from Title III funds; aides in all other programs were paid from Title I money. The contractor fee for Coldbrook was also from Title III, and fees for the other Alpha contracts were from Title I. Fees for the CMES and Learning Unlimited programs were split almost evenly between Title I and State of Michigan Section 3 monies.

Impact on Evaluation and Research

Evaluation of the contract learning programs has been absorbed into the district's regular testing and evaluation program. The 1971 spring

test results are used in place of fall pre-testing where possible, even for the performance contracts.

The district has formally encouraged local research into aspects of performance contracting. Three studies, all conducted during the 1970-71 school year, have been reported.

Mary Edmond, an assistant principal at South Middle School, conducted a study to assess changes in student attitudes in that school. The results to date have been inconclusive, but the data will probably be reanalyzed.

Gordon DeBlaey and Henry Holstege, both of Calvin College, and James D. Jones, of Western Michigan University, conducted a study of the perception of performance contracting by nonparticipating teachers in Grand Rapids. About half of the 100 teachers who responded to the survey failed to rate performance contracting either positively or negatively, but almost all of the remainder were positive. Surprisingly, younger teachers were less favorable than older teachers. Lower elementary teachers generally felt that contracted programs of the type in operation in Grand Rapids should be restricted to low achievers, whereas upper elementary and junior high school teachers felt that all students should participate in the programs.

While she was Project Director for the OEO experiment in Grand Rapids, Joan Webster developed and implemented a format for cost-effectiveness analysis, using data from the 1970-71 contracted and traditional remedial programs. School officials credit this study with providing valuable policy assistance in shaping remedial program priorities.

The Center for Educational Studies, a joint venture of the district and Western Michigan University, has sponsored two conferences on research in performance contracting. James Bosco, director of the center, told us that the OEO evaluation has had a devastating effect on the center's ability to interest researchers in this and related problems. In effect, at this point there is no research on performance contracting in Grand Rapids.

View from the Union

The teachers' union (Grand Rapids Education Association) has warmed toward contract learning. It was disturbed the first year (1970-71)

about Alpha's alleged surreptitious teacher bonuses, but this problem has now been resolved. If the staff wants to have a learning center, and if there is no violation of the master contract between the union and the district, the union states that it is satisfied. All contracts for 1971-72 included the phrase "Terms of the Master Agreement between the Grand Rapids Education Association and Grand Rapids School District are not negated by anything in this contract and shall remain in full force and effect."

GREA officials try to meet with teaching staffs that are considering establishing a learning center to explain that there may be many operating differences, such as differential staffing and less regular scheduling of classes. According to GREA's Executive Director, David L. Thompson, when only a few teachers are violently opposed to the learning center the union stance is to suggest that they transfer (with union help) to another school where they will be happier and probably more effective.

SUMMARY

The shift from performance payment to flat-rate and/or turnkey seems to have been primarily motivated by a desire to obtain greater flexibility in programming students. In some cases, it also costs less and permits wider implementation of the elements introduced by performance contracting, accommodating more students at more grade levels. Teachers also want more control of instruction.

There are disadvantages, of course. Some teachers are not efficient in the special sort of management responsibilities that are required. Contractor support is spread more thinly. Also, there is less contractual authority, and contractors tend to be less responsive in supplying materials and services on time. In some instances during 1971-72, Grand Rapids threatened to withhold payment in order to get contractors to act. In future contracts, the school district plans to develop detailed timing schedules with penalty clauses. For the kinds of techniques introduced in Grand Rapids, it appears that one year is not sufficient exposure for the district to carry on alone. It seems desirable to have at least one transition year during which there is strong contractor consultation

support. At least, Grand Rapids feels that the 1971-72 year in which there was substantial contractor involvement in its programs was a desirable step between the 1970-71 programs and the goal of school operated programs.

In Grand Rapids, the concept of performance contracting has become indelibly identified with individualized instruction. We asked two school administrators whether Grand Rapids might one day again resort to performance contracting in order to introduce an innovation into the district, but neither could conceive of circumstances that would tempt them to consider such a recommendation. It was not clear whether they were negative toward performance contracting or whether they felt its potential in Grand Rapids had been reached. What is clear, however, was summed up in the comment that "performance contracting will probably go away, but the residual benefits will remain. The teachers will never be the same."

VII. CONCLUSIONS

INTRODUCTION

In general, our review of activities in the five school districts that we studied in depth in 1970-71 reinforced the conclusions of that study. We will review the more significant of those conclusions and add some further comments in light of the 1971-72 activities.

Performance contracting in the five districts discussed in this report seems to have brought about changes in the content and methods of instruction, measurement and evaluation, and management. In another area, the pattern of use of school resources, performance contracting may not be having a lasting effect. In still another area, the effectiveness of instruction, definitive data are scarce but gains achieved in some programs appear superior to gains achieved in conventional remedial programs, while in other cases the results are about the same.

CONTENT AND METHOD OF INSTRUCTION

- In each of the five districts, the use of a diagnostic-prescriptive approach to individualization of instruction has continued and, in some cases, has spread to more schools and students. In one case, individualization has been applied to additional areas of the curriculum.
- The performance contracting technique can be a mechanism for ensuring a more uniform approach to instruction among classrooms. Without direct contact with a contractor under the pressure of performance-related payments teachers are likely to adjust the program to their individual teaching styles and more diversity among classrooms will result.
- There has been increased emphasis on providing a wide variety of self-instructional materials and equipment appropriate both to the students' social maturity and to their level of cognitive development.

- o The performance contracting technique is still largely limited to the basic skills of reading and mathematics.

RESOURCE USE

The use of paraprofessionals in the classroom and other features of the 1970-71 programs raised the hope that performance contracting might lead to a reduction in the cost of remedial programs. The succeeding year's experience did not strengthen this hope, however. With one exception, programs used about the same resource support as they had the year before or even greater support was provided.

EFFECTIVENESS OF INSTRUCTION

We have only limited data on achievement gains during 1971-72. In Gilroy, reading teachers using the WLC approach were markedly successful in improving their students' scores. In the other districts, the results of the performance contracting programs or their progeny are mixed. In Gary the 22-day teacher strike led to cancellation of the post-test, so no gain scores are available. In Texarkana the gains were uniformly less than the objectives, for example, instead of 75 percent of the students in the labs making one grade level gain or better, only 38 percent made one grade level gain or better in reading comprehension and only 28 percent in arithmetic. In Norfolk, the program group in most but not all cases did not show gains significantly different from the control group. In Grand Rapids the results were mixed; one program had gains of about two achievement years and the others were in the 0.5 to 1.2 range. In Gilroy in a program started in 1971-72 only two of the 29 students achieved the target gain of nine months' growth. The students who had been in the 1970-71 program but were not in such a program in 1971-72 did exceptionally well on the third-grade reading test. The fourth-grade results were no better than expected for those who had participated in the program but nonparticipants made substantial gains. Whether these results were due to curriculum improvements can't be determined.

MEASUREMENT AND EVALUATION

Because performance contracting ties contractor payment to student test results, it focuses on testing and evaluation. This has had several effects:

- Teachers and administrators have become more supportive of efforts to emphasize student learning as a measure of the effectiveness of instruction.
- There has been increased emphasis in the research community on improving measuring instruments. For example, (1) a number of organizations have been working to develop reliable learning-mastery tests, and (2) additional work has gone into refining the interpretation of standardized achievement tests.
- There has been increasing concern at all levels of responsibility within the schools with producing useful and informative evaluations.

MANAGEMENT

Through the performance contracting experience, school administrators became intensively involved with the course of the project--from contractual arrangements to the classrooms. This has had the effect of educating and sensitizing administrators to problems and possibilities in a number of areas:

- The development and implementation of new approaches to instruction.
- Teacher training.
- Test selection and evaluation design.
- Union pressures.
- Federal funding arrangements.